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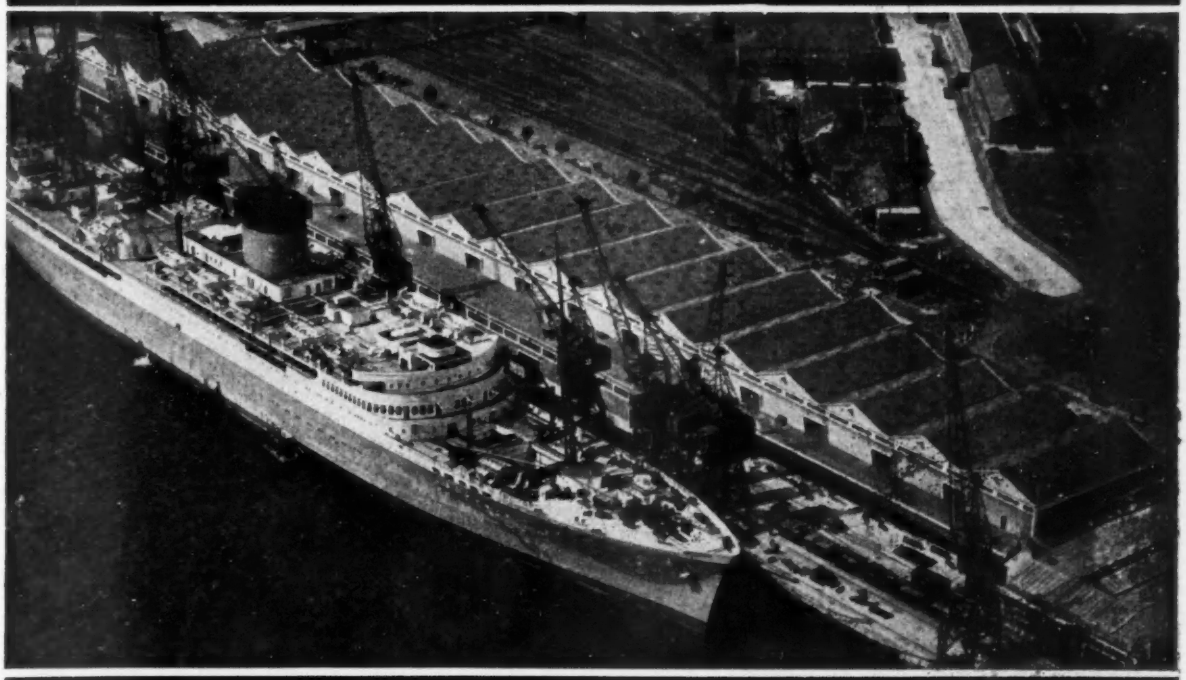

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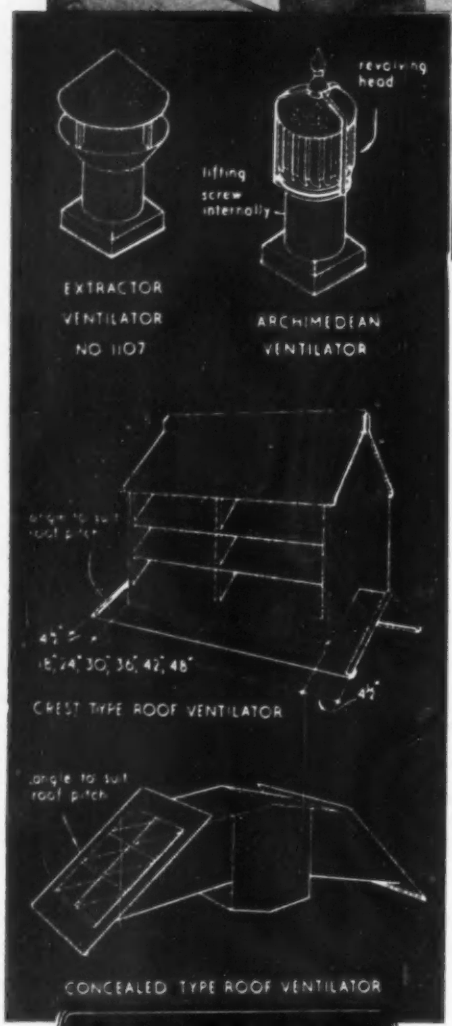

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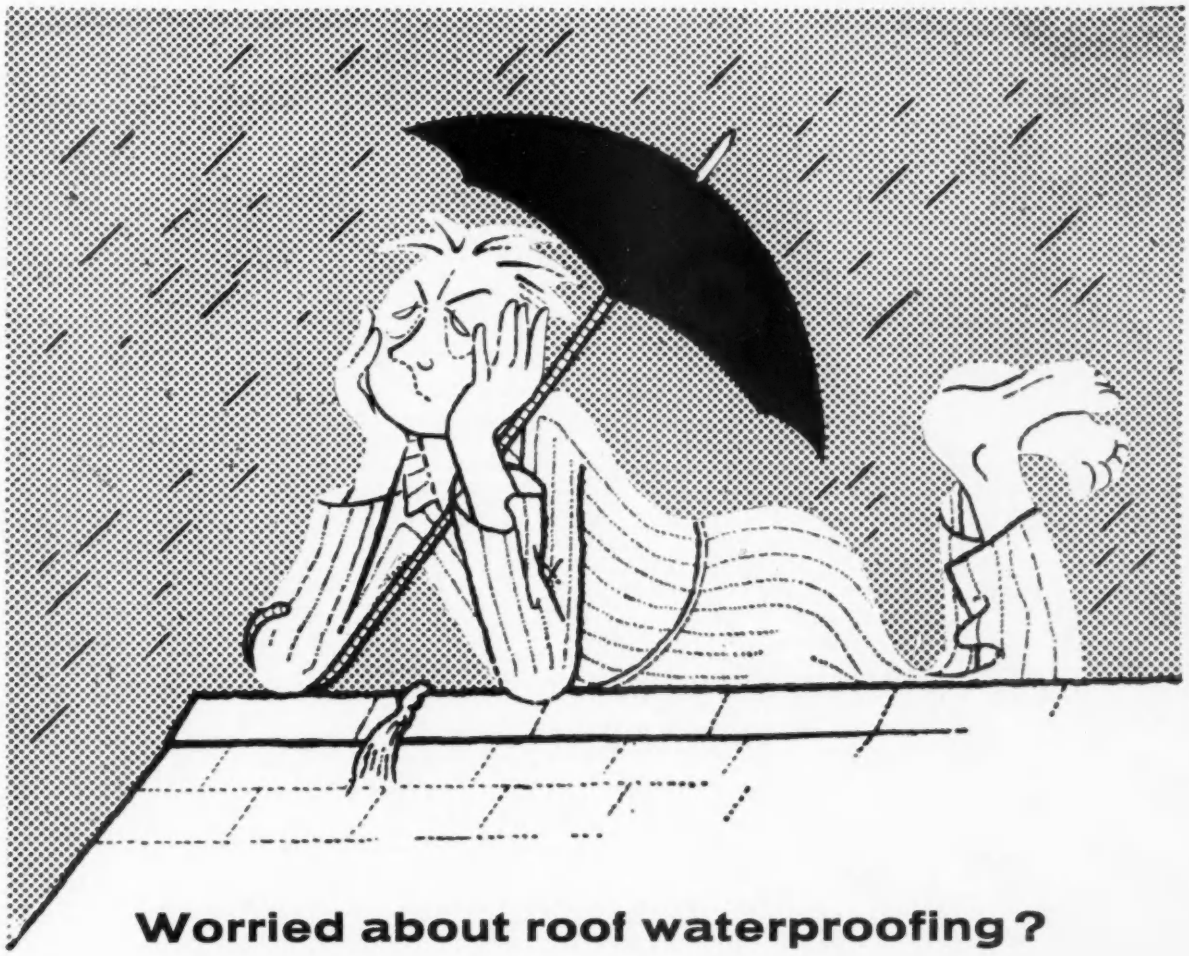

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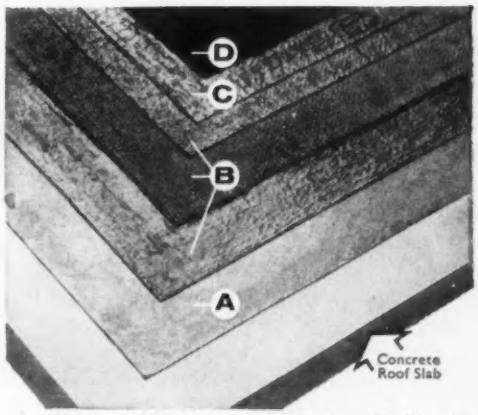

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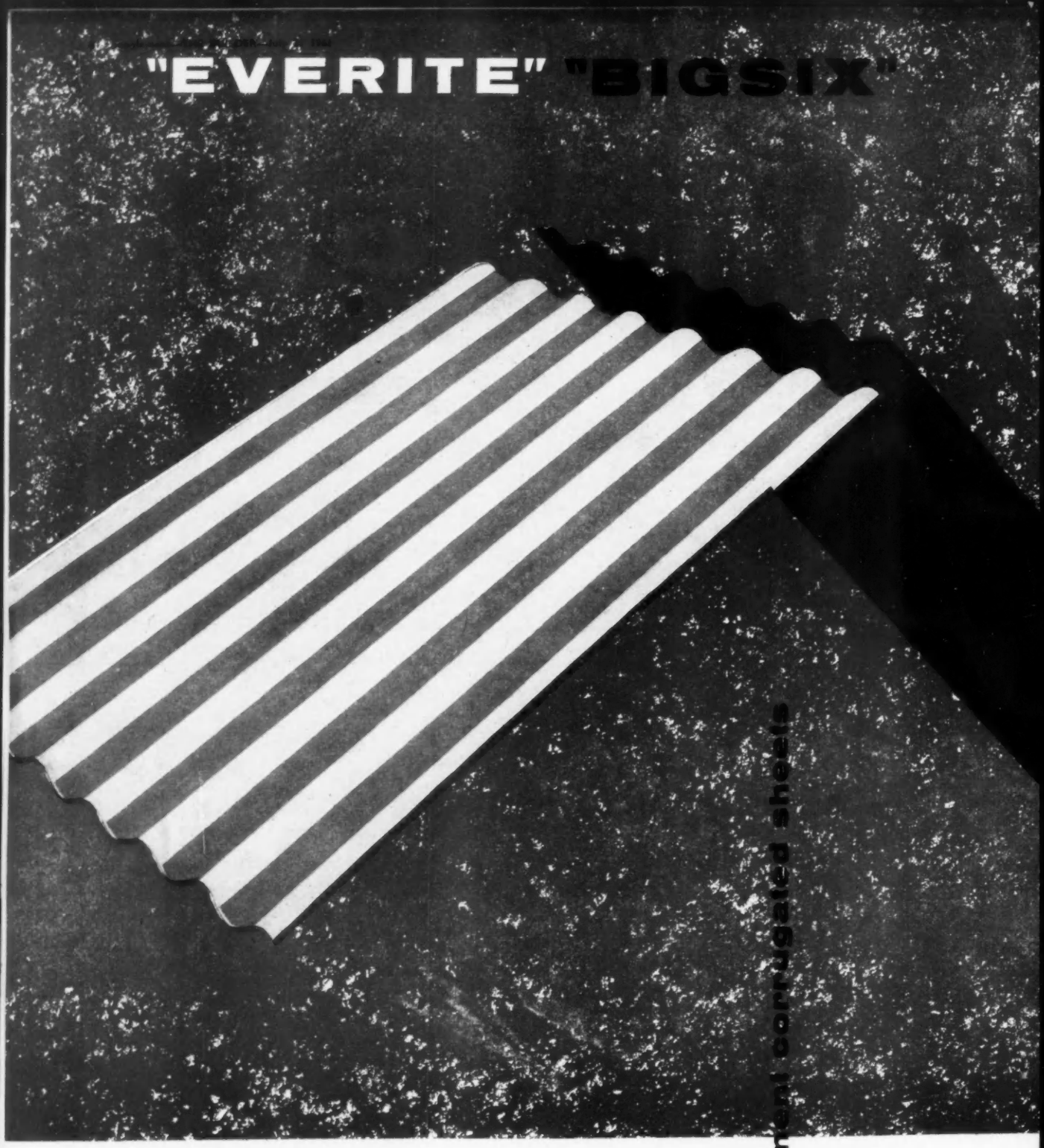

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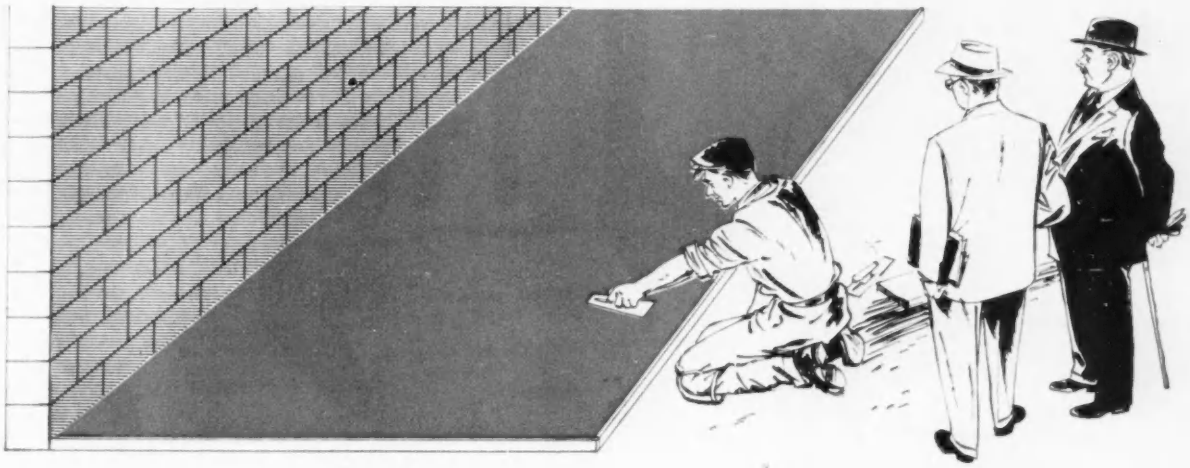

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BUILDER "And yet, to get this strong brick-red shade, I am only using 3 lbs. of this Febtone colouring compound per cwt. of cement."

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9/59

345 FT TESTED

Extract from a report prepared by:
Mr. G. C. Wilson for R. H. Harry Stanger, Testing Consultants, The Laboratories, Summerfield House, Barnet Lane, Elstree, Herts.
5th October 1960
Report of permeability test carried out with Febproof Integral Liquid Waterproofing Compound in a Mortar Mix.

Mix:—	Febproof Treated	Control Untreated
Sand, Parts by Volume	3	3
Portland Cement by Volume	1	1
"Febproof," Pints per cwt. Cement	1	Nil
Water/Cement Ratio	0·47	0·53
Slump Inches	1½"	1½"

PERMEABILITY TEST RESULT ON MORTAR TREATED WITH FEBPROOF

Water Pressure		Water Pressure Held For	Amount of Water Percolation
Feet Head	Lbs. per sq. in.		
46	20	1 HOUR	NIL
69	30	1 "	NIL
92	40	1 "	NIL
115	50	1 "	NIL
172	75	1 "	NIL
230	100	1 "	NIL
287	125	1 "	NIL
345	150	1 "	NIL

The thickness of the 1-3 cement, sand mortar slabs, was 2", and age at date of test 28 days. Water percolated through all untreated control specimens. **No** water percolated through Febproof treated specimens. SEE TEST RESULT ABOVE.
Signed by G. C. Wilson for R. H. Harry Stanger.

With a sustained water pressure of 150 lbs. p.s.i. equalling 345 ft. head of water, this independent Test Report illustrates the remarkable waterproofing efficiency of Febproof Integral Liquid Waterproofer

Few, if any, cement waterproofing compounds can match this performance result, and few, if any, are as cheap to use. Only one pint of FEBPROOF is required per cwt. of cement to make concrete and cement renderings completely impervious. In addition FEBPROOF greatly improves plasticity and workability and considerably increases compressive strength.

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BY APPOINTMENT TO HER MAJESTY QUEEN ELIZABETH II BRICK MAKERS

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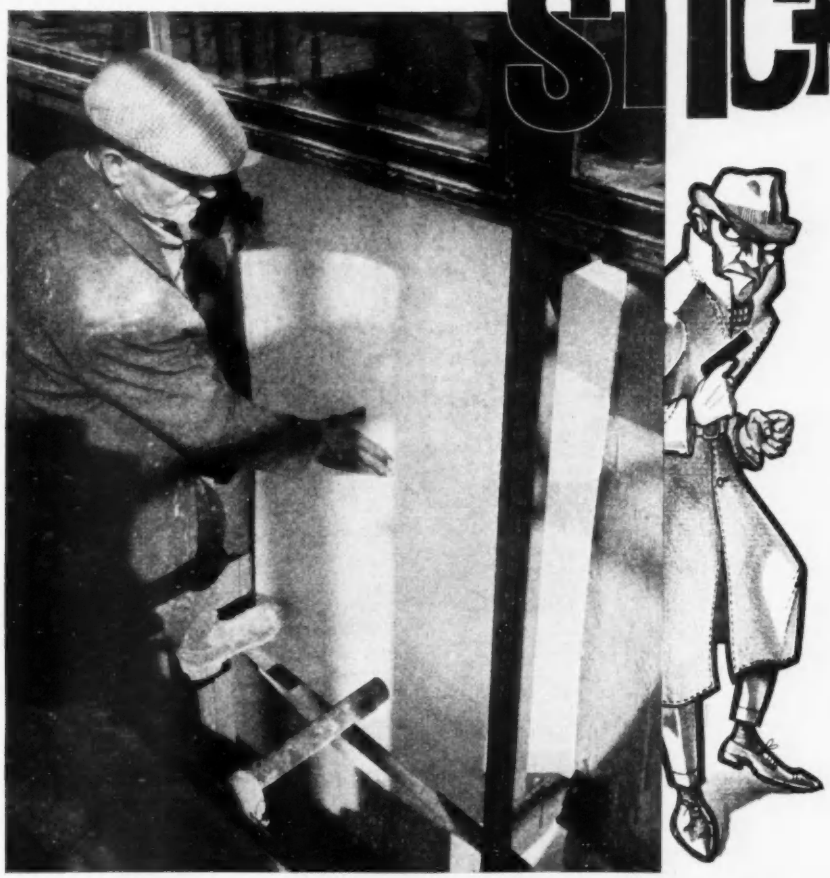

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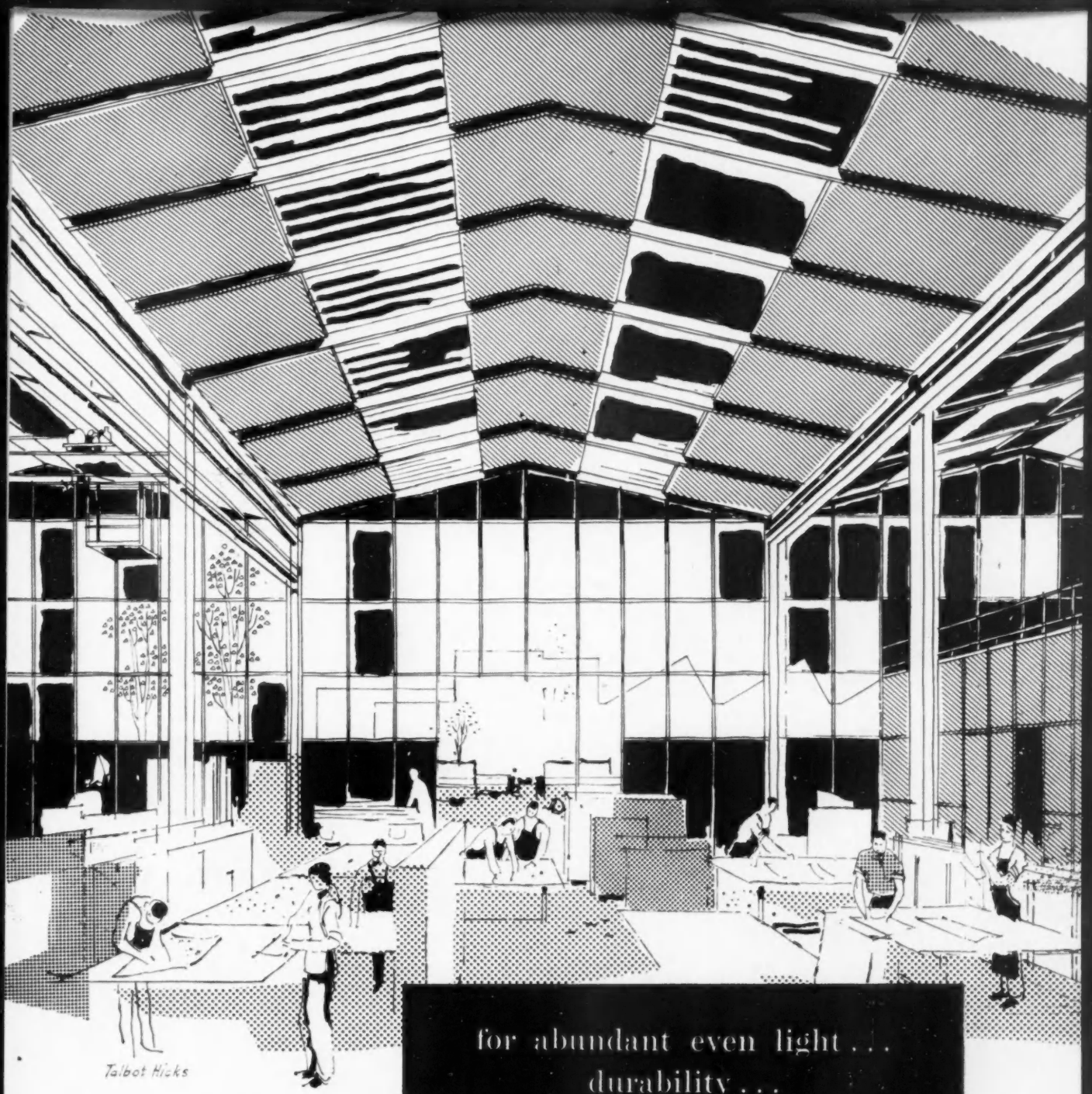

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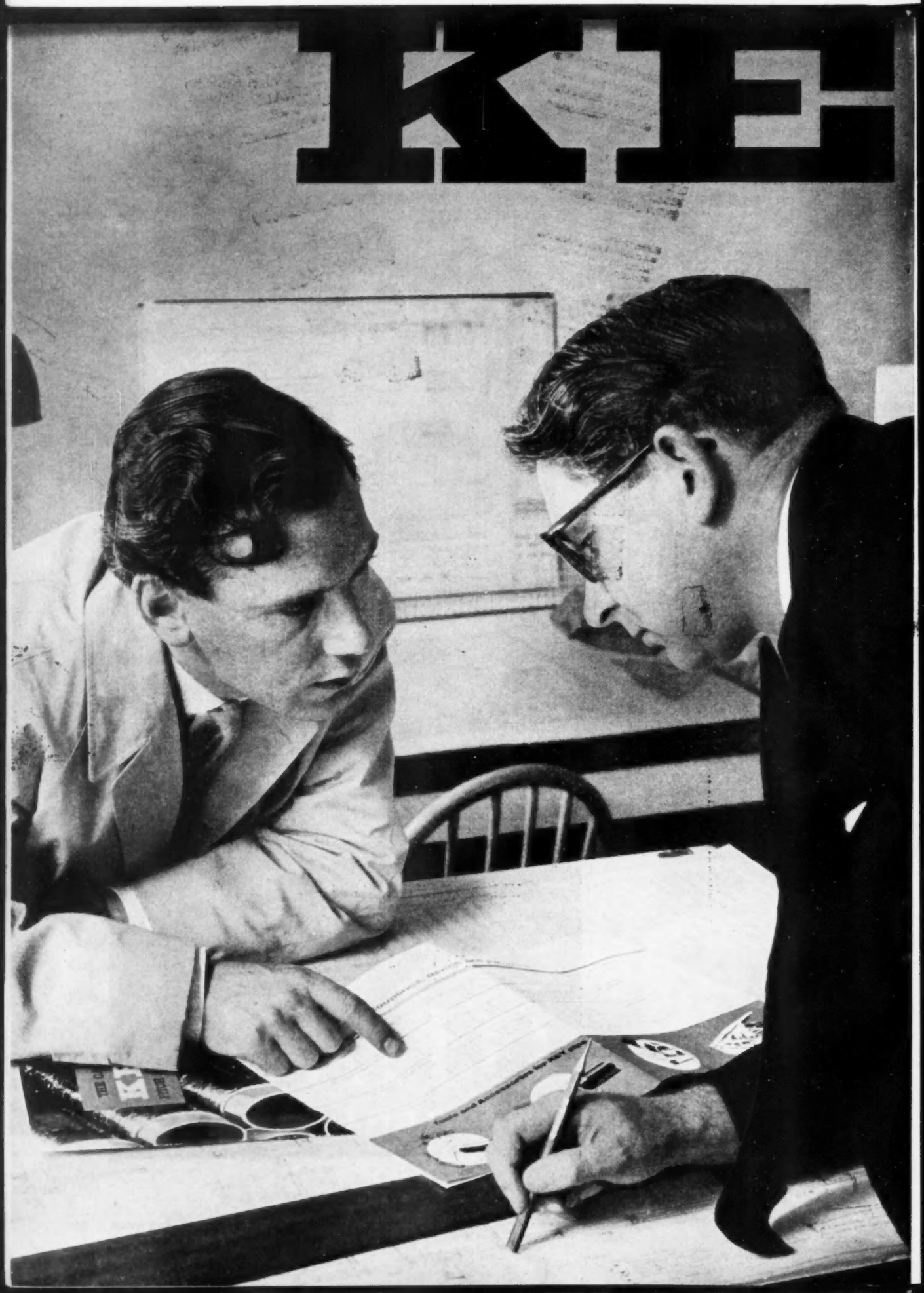
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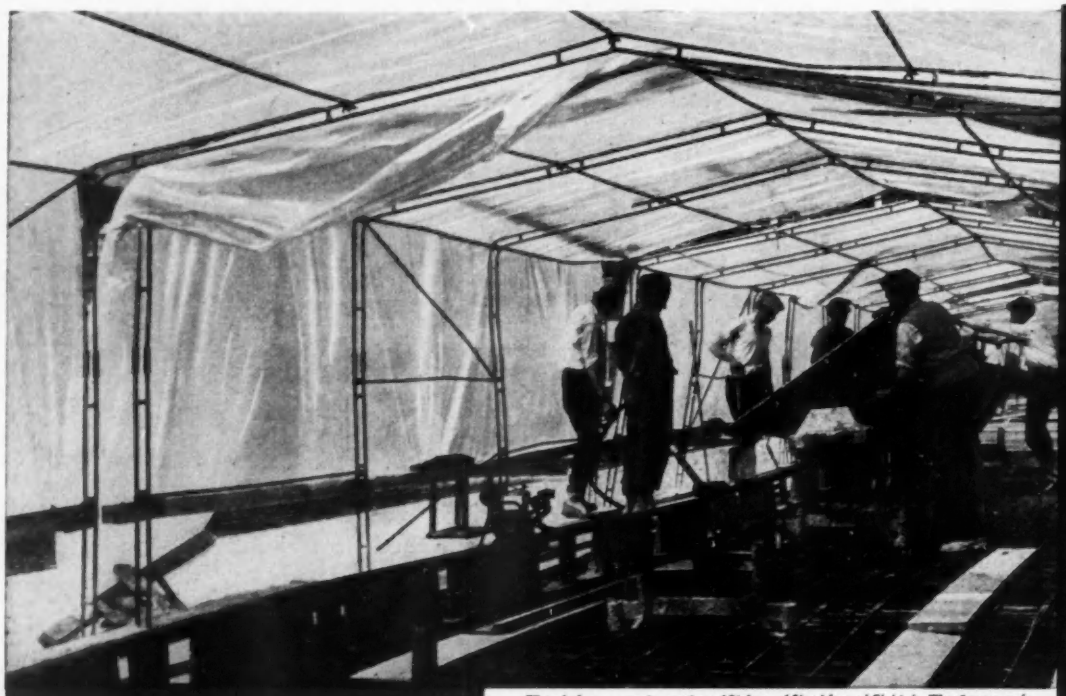
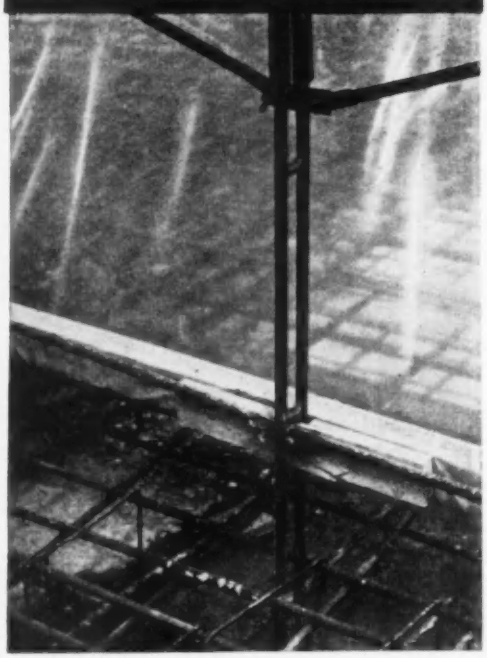


The shelters were in sections 12' long, 15' wide and 7' high. The framework was fabricated from ½" gas barrel and clad with 'Visqueen' 500 (heavyweight). Architect: Ley Colbeck and Partners.

'VISQUEEN'

polythene Building Sheet



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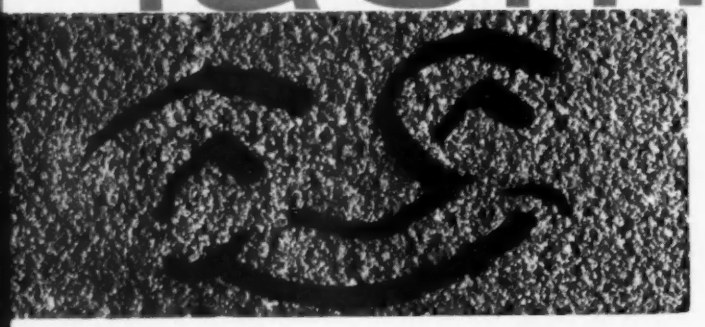

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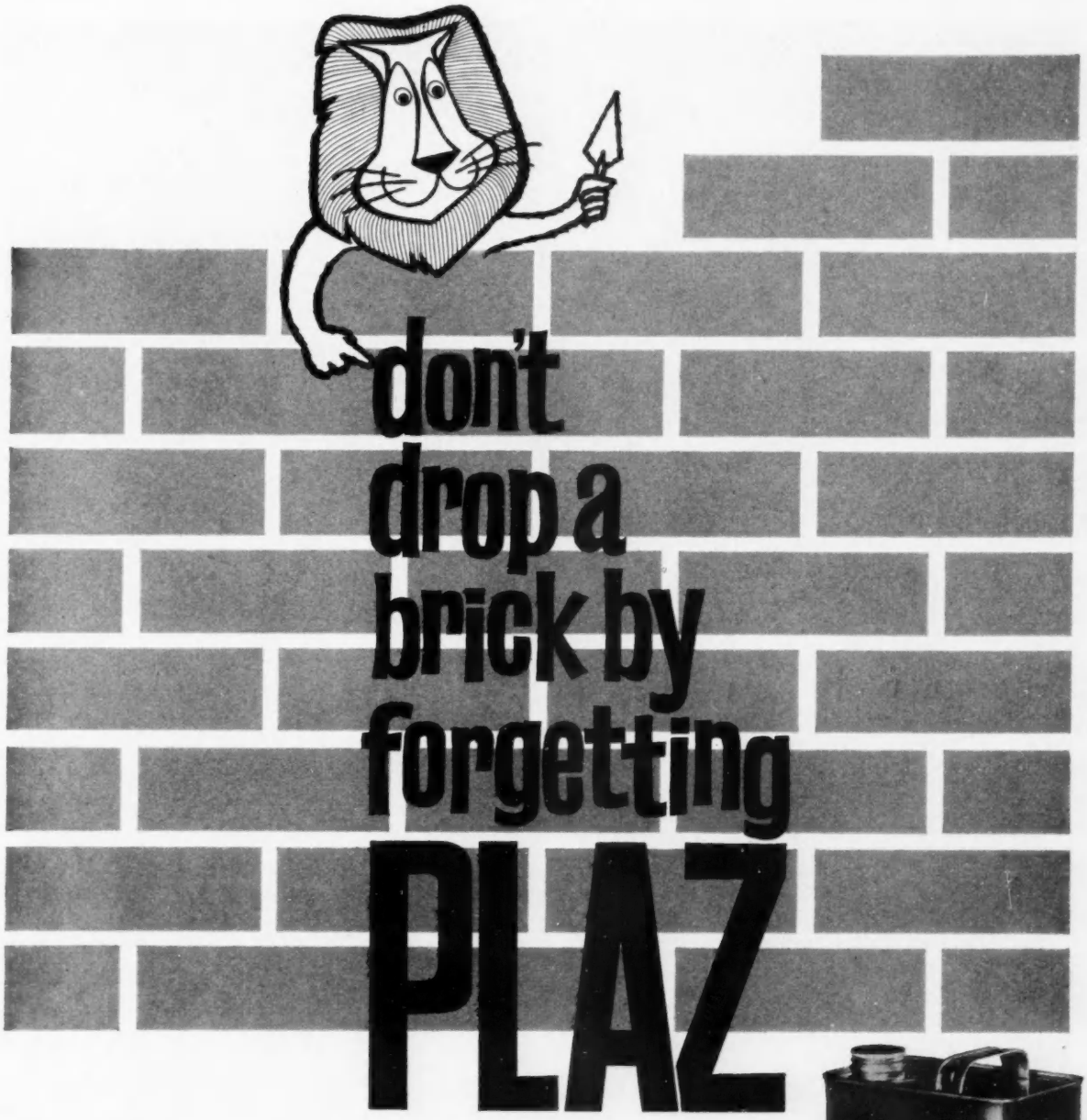

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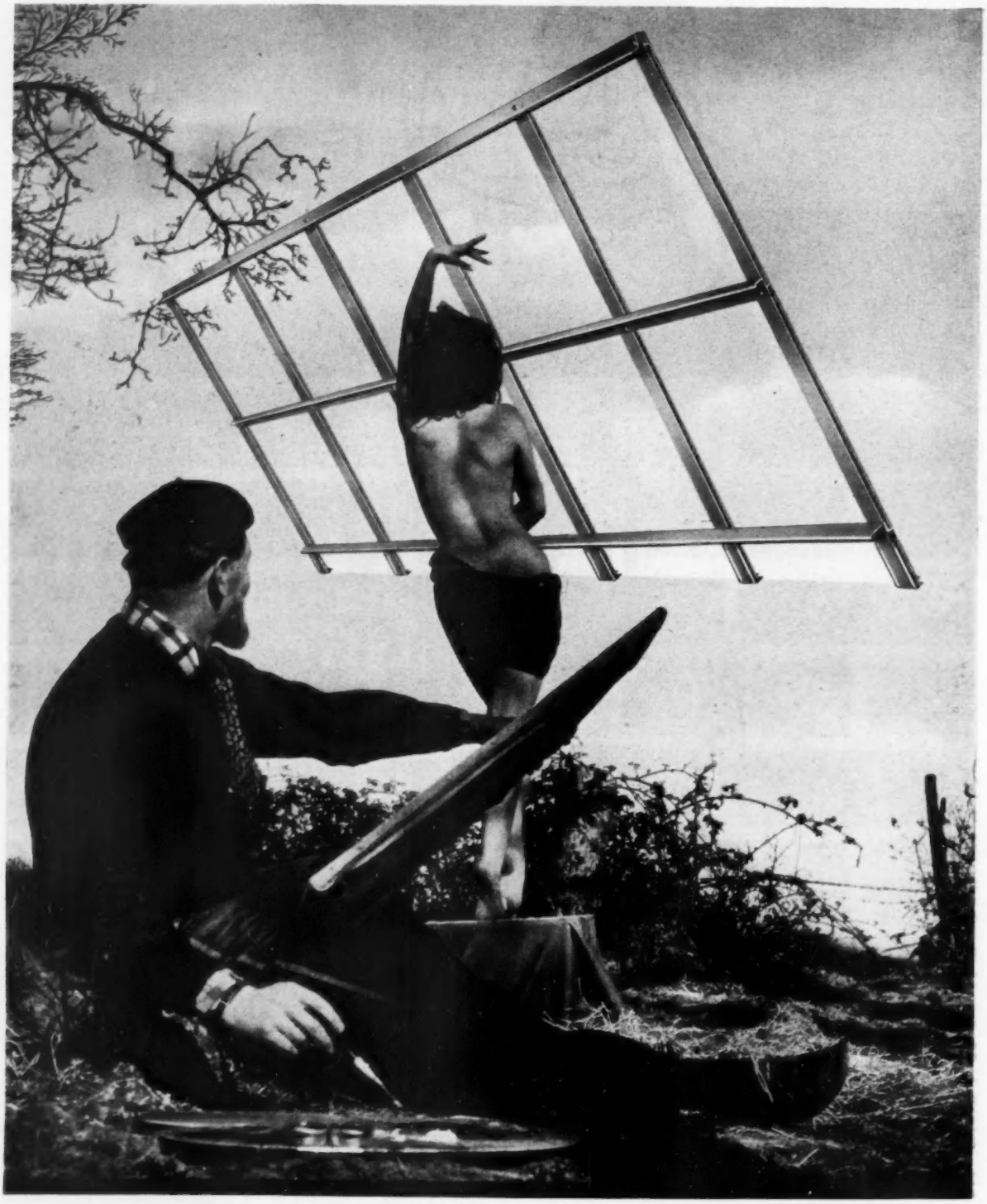

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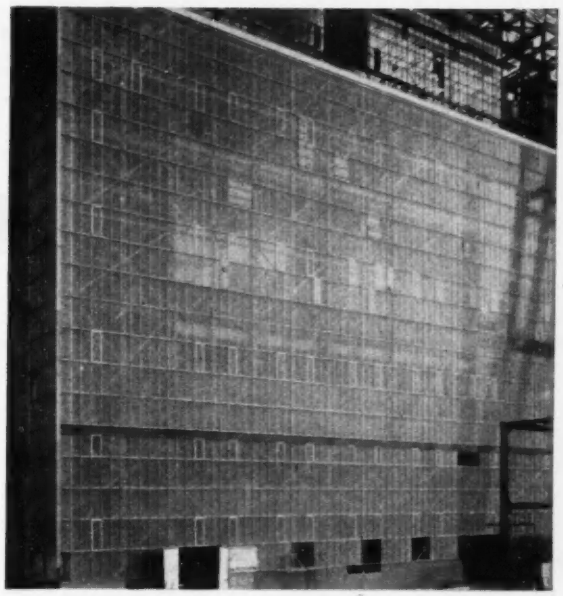
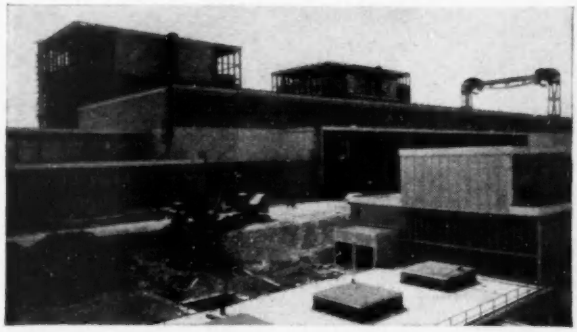
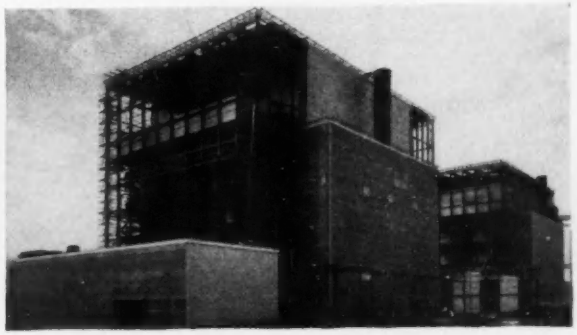
at Hinkley Point



The building at Hinkley Point Nuclear power station, the first of its size in the world, will shortly be completed. As an outer skin for the two giant reactors and to provide daylight in other parts of the plant, Williams and Williams Aluminex Patent Glazing was chosen. The difficulties to be overcome included great wind stresses on such tall isolated structures with an exposed coastal site as well as the corrosive atmosphere of sea air. The glazing was tested in the Williams & Williams wind tunnel to ensure that it would withstand the loads imposed by winds of up to 104 m.p.h. at a height of 180ft. Cost and a finished appearance that will preserve the local amenities also had to be considered. For the two 180ft. high reactors, the 780ft. long turbine house, pumphouse, chlorination plant and decontamination building over 250,000 sq.ft. of Aluminex is being used, glazed with plate glass or fibre-glass panels.



Williams and Williams Aluminex Patent Glazing will provide daylight for the working areas in the turbine house—the longest in Europe—and the pumphouse (foreground).



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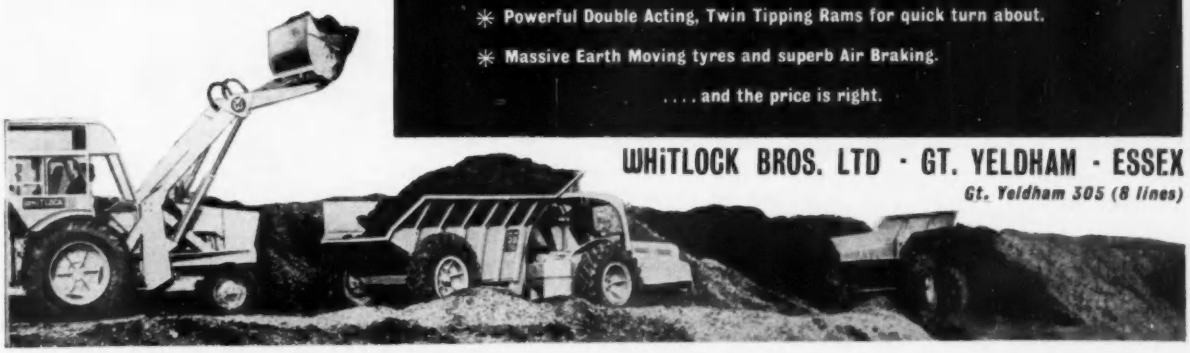

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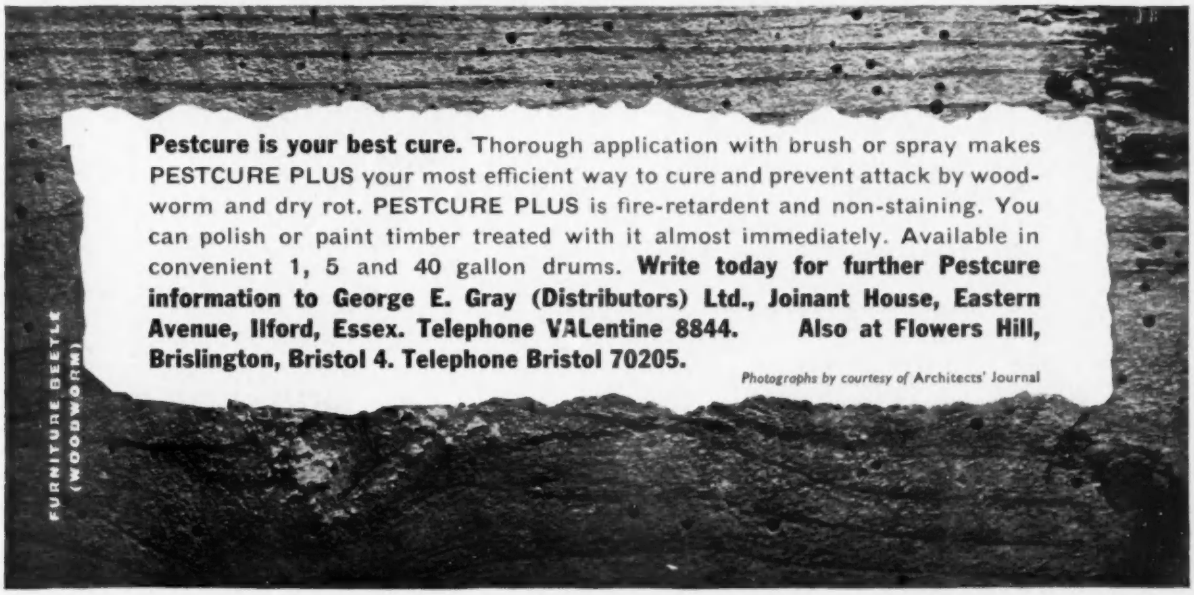

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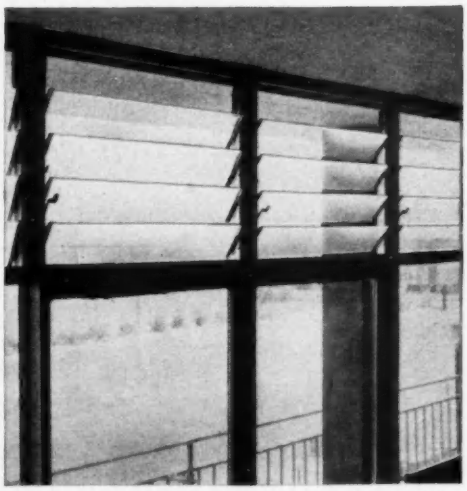

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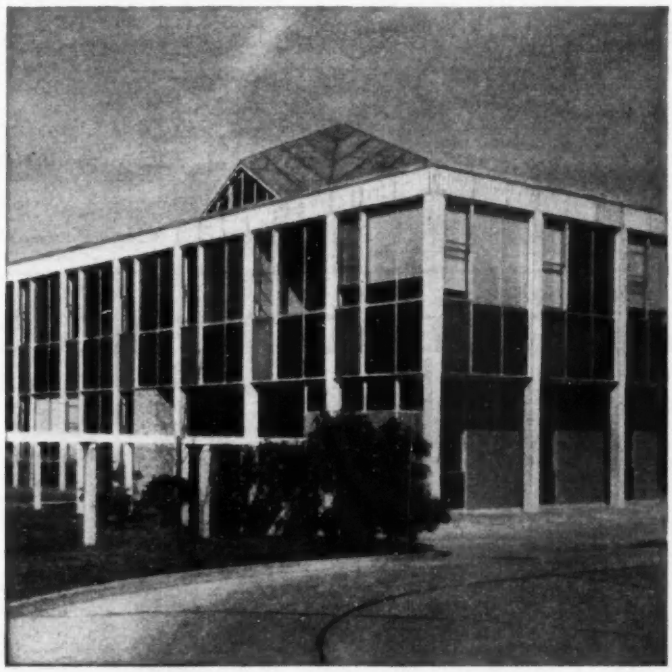

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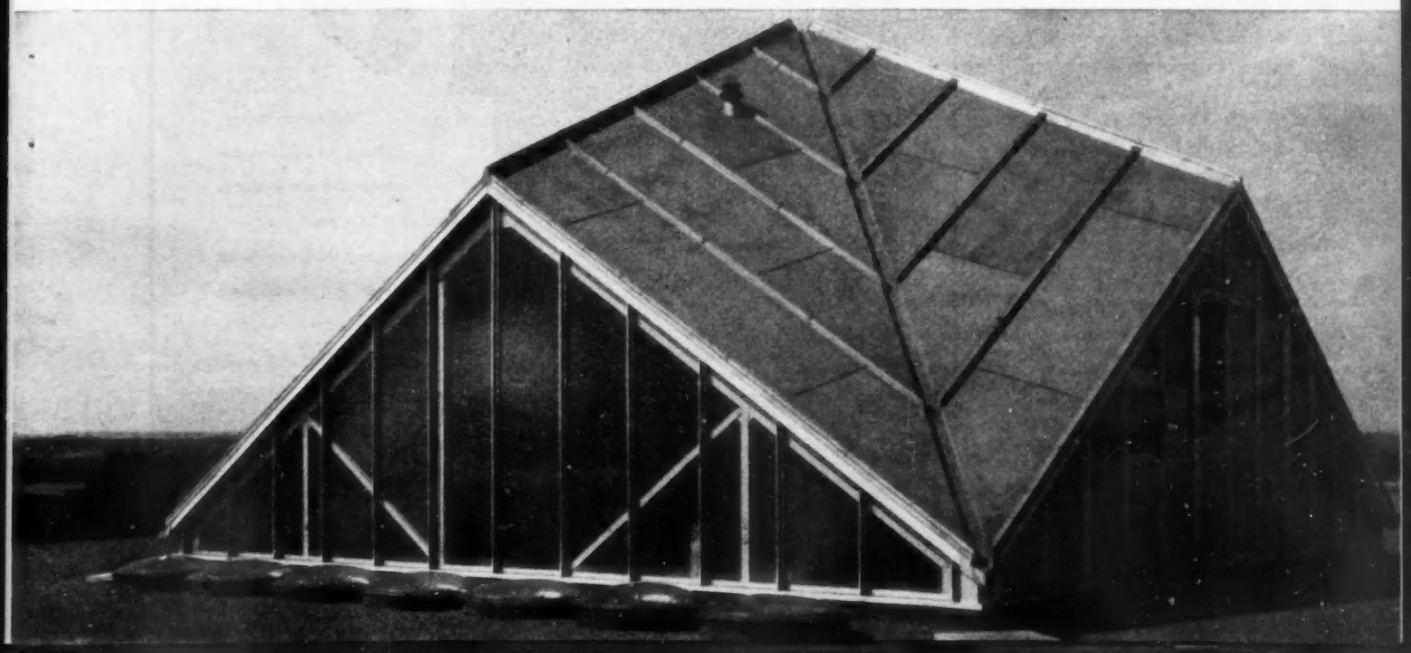

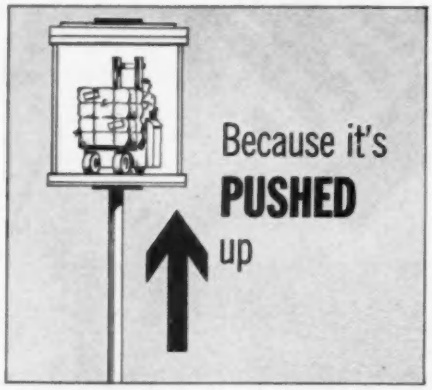

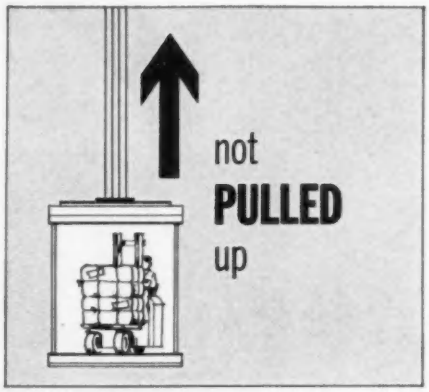

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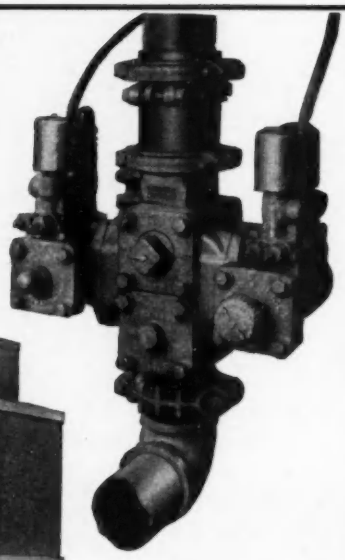

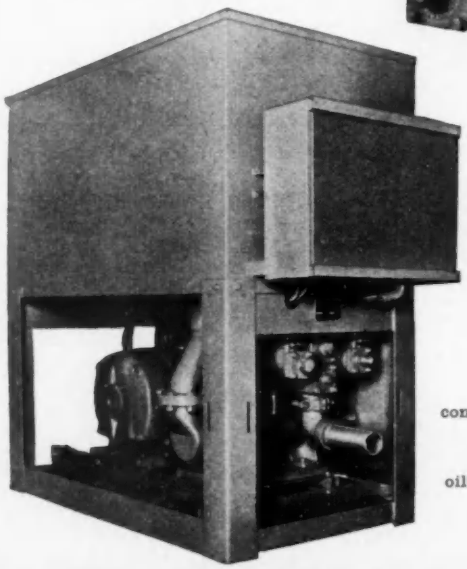

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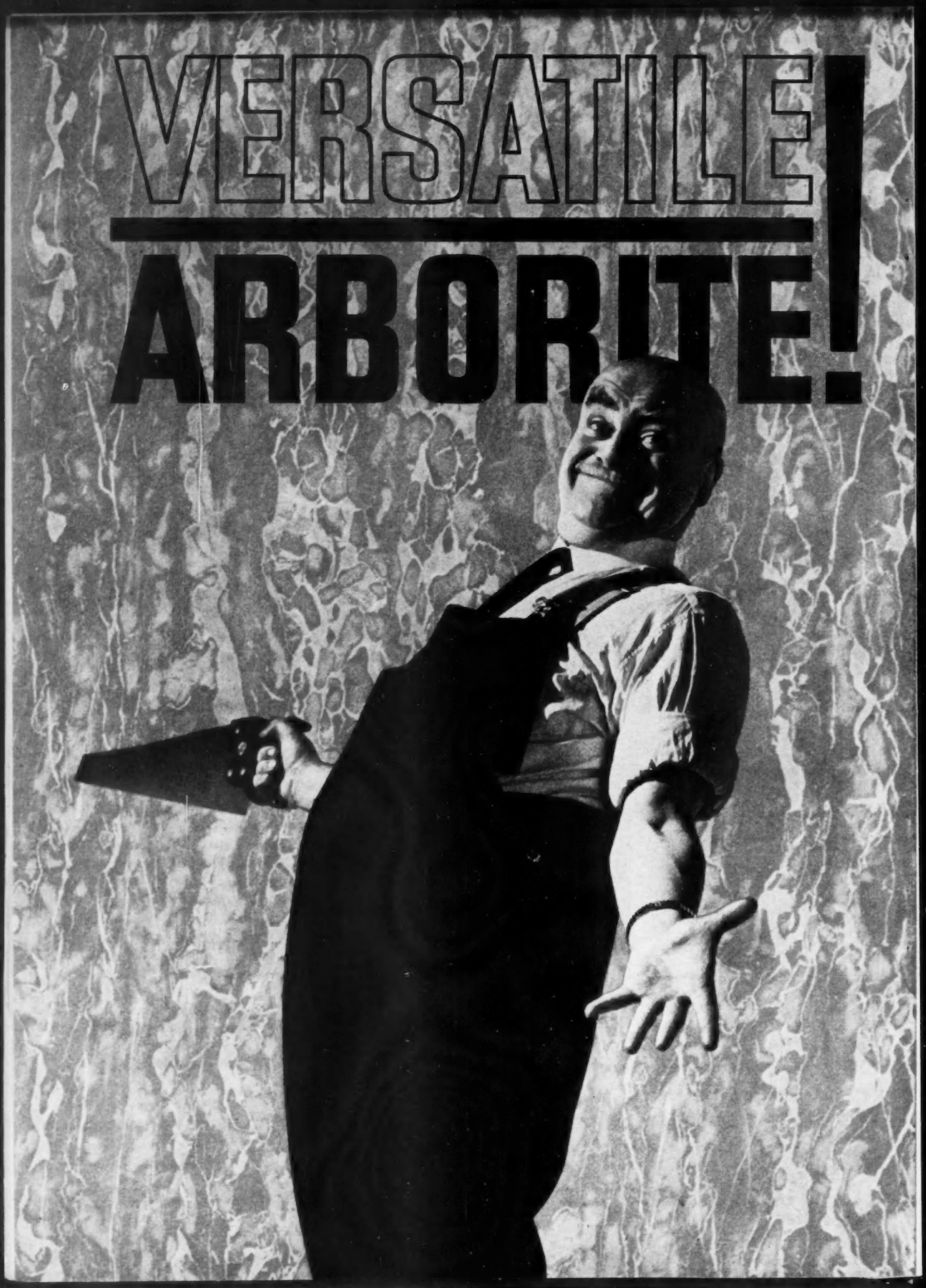
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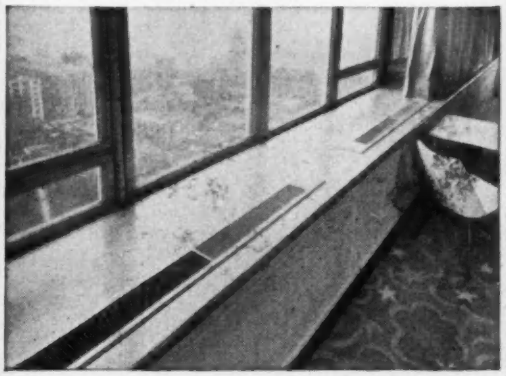

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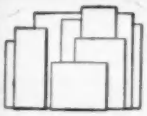

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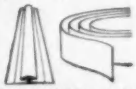

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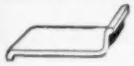

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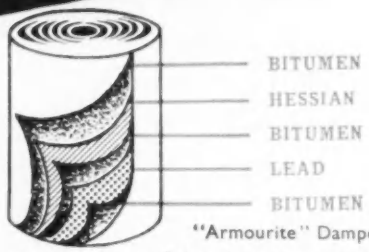

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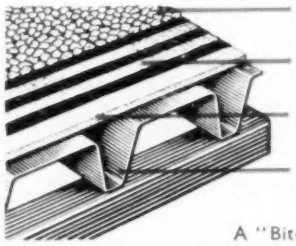

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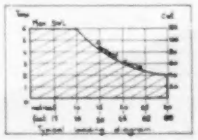

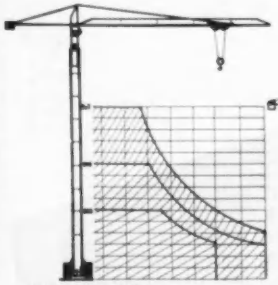

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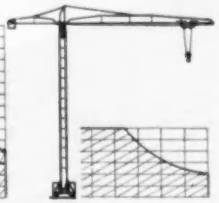

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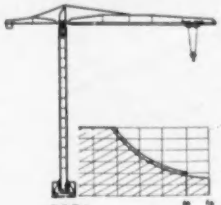

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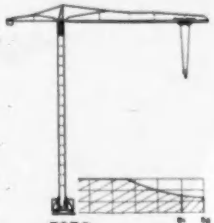

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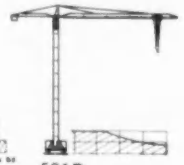

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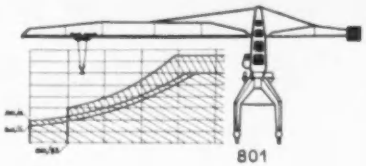

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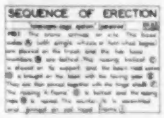
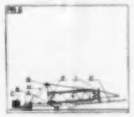
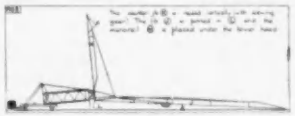
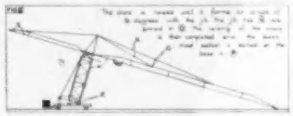
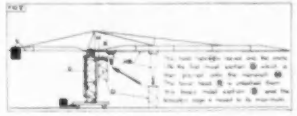
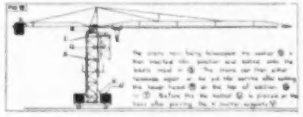












1961 GENERAL SPECIFICATION (FULL RANGE)

Ets F. POTAIN & Cie La Clayette (S&L) France — N° II — Dr. Leader — Dr. Frost

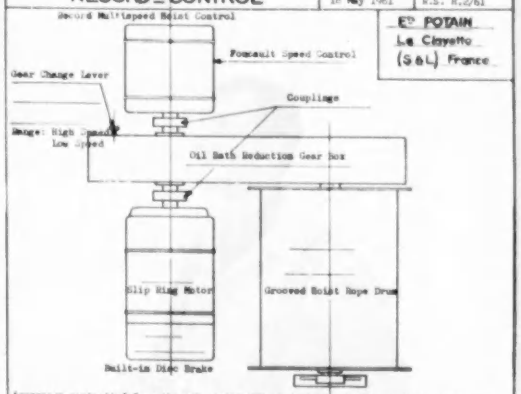
TYPES			205	506	506	406	406/4	406/2	506B2	506B4/4	506B4	506B6	607B2	607B3	607B6	707B2	805A2	805A3	806	903	905	907
Capacity in metre/tons (Radius × Load in Tons)			4	5	9	11	15	16	20	20	20	20	30	28	30	36	50/56	45/52	60/72	90/105	120/140	160/190
Productivity index (in m²/T)			28	47,6	114	146	243	259	270	352	292	308	702	603	675	810	1160	956	1276	2364	2850	3040
Maximum jib radius (in feet)			34	40	50	60	66	75	82	82	82	82	82	92	99	99	82	99	99	99	132	132
Minimum working radius (in feet)			3	3	4	4	5	5	5	5	5	5	6	6	6	6	8	8	8	8	8	8
SWL at maximum radius (in cwt)			8	8	12	12	15	15	15	15	15	15	24	20	20	24	40	30	40	60	60	80
Maximum SWL (in metric Tons)			10	10	1,2	1,2	1,5	1,5	2	2	2	2	3	3	3	3	6	6	6	6	10	15
Maximum SWL Radius (in feet)			27	34	26	33	36	42	36	36	36	36	35	35	38	44	31	29	40	56	47	40
Maximum height under hook (in feet)	Free travelling		—	48	70	80	99	99	99	99	99	99	135	135	135	135	128	128	128	220	187	187
	Static	Free standing	41	48	70	80	90	90	90	90	99	90	125	125	117	125	125	125	125	200	165	165
		Anchored	—	—	140	160	200	200	200	200	200	200	330	330	330	330	333	330	330	400	400	400
	Climbing	(on Tower stubs)	—	—	—	—	200	200	300	300	300	300	500	500	500	500	500	500	500	920	430	430
Maximum speed (feet/minute)			100	100	105	105	140	140	122	122/244	150	117	200	200	200	200	200	200	200	200	200	450
Max SWL with maximum speed (in cwt)			10	10	12	12	15	15	15	15/6	15	20	30	20	20	30	40	30	40	60	60	80
Speed of maximum SWL (feet/minute)			100	100	52	52	60	60	32	32/64	37	30	75	75	75	75	38/75	38/75	38/75	66	66	40
Slewing speed (in R P M)			1	1	1,2	1,2	1	1	1	1	1	1	9/10	8/10	8/10	8/10	9/10	8/10	8/10	9/10	8/10	3/4
Traversing trolley speed (feet/minute)			82	82	100	100	116	116	116	116	116	116	116	116	116	116	116	116	116	100/50	100/50	100/50
Travelling speed (feet/minute)			—	66	82	82	82	82	82	82	82	82	100	100	100	82	82	82	82	100	100	100
Power of motors (in hp)	Hoisting		4	4	6	4+6⅔	6⅔+11	6⅔+11	7½	7½+5	6⅔+11	6⅔+11	20	15	15	20	25	20	25	60	60	60
	Slewing		0,9	0,9	1	1	1½	1½	2	2	2	2	3	3	3	3	5	5	5	12	12	12
	Traversing		0,6	0,6	¾	¾	1½	1½	1½	1½	1½	1½	2	2	2	2	2½	2½	2½	5	6	8
	Travelling		—	1½	1½	1½	3	3	3	3	3	3	2+2	2+2	2+2	WITH TWO MOTORS AND ANTI-SWAY DEVICE				6+6	6+6	6+6
Square cross section of mast			18¾/21	18¾/21	3' 4"	3' 4"	4'	4'	4'	4'	4'	4'	5' 3"	5' 3"	5' 3"	5' 3"	5' 3"	5' 3"	5' 3"	6' 9"	6' 9"	6' 9"
Height of mast section (Standard)			—	—	9' 10"	9' 10"	9' 10"	9' 10"	9' 10"	9' 10"	9' 10"	9' 10"	7' 7"	7' 7"	7' 7"	7' 7"	7' 7"	7' 7"	7' 7"	16'	16'	16'
Weight of crane in Tons (full travelling height)	Without ballast		2,9	3,3	6,4	7,5	10	10,250	11	11	11,5	11,5	23	23,5	24	25	28	30	33	40	42	50
	With ballast		6,4	7	23,2	26,5	33,5	34	35	35	35,5	35,5	62,25	63,3	63,8	67	68,5	70	78	100	100	110
Track width (Centre of rails) in mm			—	2320	2800	2800	2800	2800	2800	2800	2800	2800	4000	4000	4000	4500	4500	4500	4500	6000	6000	6000
Erection time in hours (full height)	Free travelling		—	1	12	12	18	18	20	20	20	20	36	38	38	38	40	40	40	50	50	60
	Static or climbing		20 min	20 min	10	10	15	15	16	16	16	16	30	32	32	32	34	34	34	40	40	50

Note. Measurements given in feet and metres are only approximate. The manufacturers reserve their right to modify or alter any design or specification without notice and prejudice.

RECORD_CONTROL

18 May 1961 — R.S. N.2/61

Ets POTAIN
La Clayette
(S&L) France



Apparatus controlled from the cab on the 905 or from a portable remote control panel fitted with push buttons and rotary controls on 506 or 805.

HOISTING. The slip-ring hoist motor fitted with built-in disc brake starts by progressive elimination of resistances, which on the first notches of the rotary control is governed by the Foucault speed controller, enabling the driver to obtain various speeds and commence the lifting of a load without causing any shock during the operation.

LOWERING. The motor starts also on resistances but these can be eliminated very quickly to obtain high speeds immediately. However, the full value of the Foucault speed control unit is fully realized by enabling speed variations from 1500 rpm to 30 rpm on the hoist motor, therefore making it possible to place maximum loads to extremely fine limits.

NOTE. The Record multi-speed hoist control is the only device enabling tower cranes to have a lowering motion with controlled speeds and a smooth placing of loads through the motor. The only possible method used to date is the manual release of the brake which in fact is prohibited by all European and British safety regulations. This device therefore enables continuous speed variations:

a) When hoisting or lowering
b) With heavy or light weight loads
c) without trouble from voltage variations

No adjustment is required as the various speeds are obtained by balancing the electric field between the motor and the Foucault speed control unit and no wearing parts are involved.

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30/6 per gallon in 5-gal. pails.

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VELODEX

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38/3 per 1-gallon tin.
36/- per gallon in 5-gal. pails.

Write for colour card and booklet VE.I.

AP 353

Does Lord Lud still use the Club, Fortescue?

Indeed, Sir Henry. He is, at this moment, recumbent in his usual armchair —asleep.

I am glad to note, then, that he has conquered his infernal habit of snoring . . .

On the contrary, Sir Henry. It is *we* who have conquered his snoring! Cast your mind back to the last Committee Meeting . . . when I was largely instrumental in getting it agreed that Cullum instal their Acoustic Tiles in here . . .

Ah yes . . . Cullum, the tile people. I had already formed the impression this ceiling looked unusually appealing to the eye. And Gad . . . you mean Lud is snoring now?

Precisely, Sir Henry! But Cullum Acoustic Tiles *control* the sound. Cut down *unwanted* noise. Ensure that air of 'padded' peace and unruffled calm.

Steward! Two more doubles please . . . we must drink a toast to Cullum at once!

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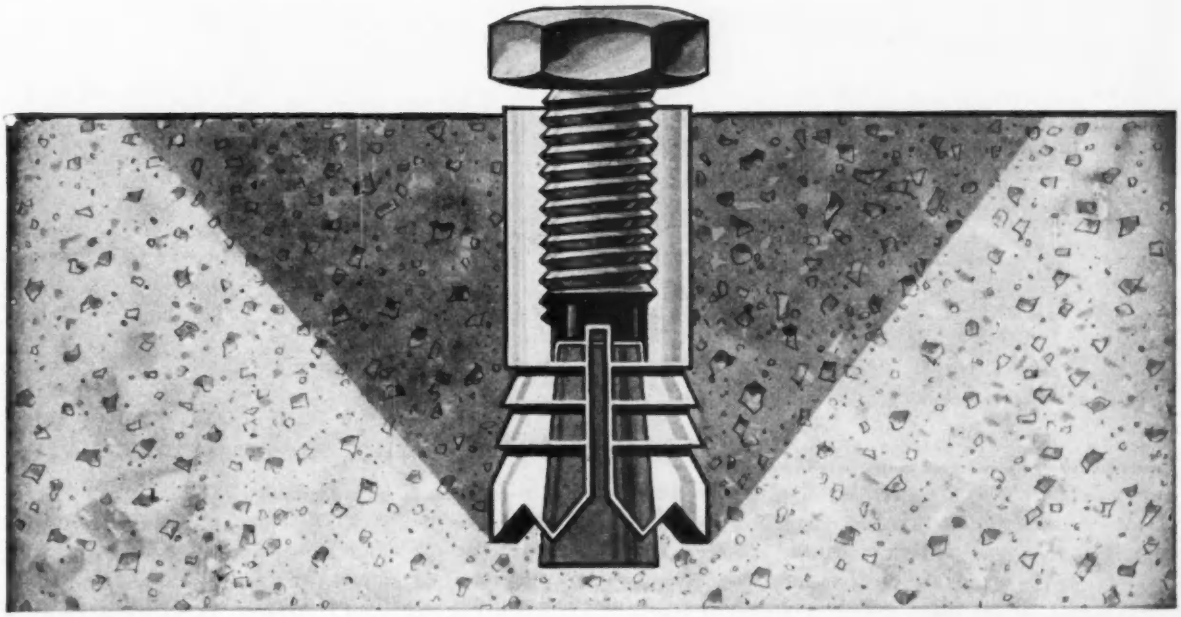
Construction framing with tough resilient Canadian spruce

TERRIER

IS JUST THE DRILL FOR FASTENING INTO DENSE CONCRETE IN ONE OPERATION



Every time you fasten with Terrier, now being manufactured in the U.K. by Ramset, you use a brand new eight tooth drill—*because the drill is part of the fastener!* This revolutionary idea really works. With Terrier you can fasten into dense concrete in less than ½ minute – into granite in 3 minutes. And it's fastening for keeps – to withstand a load of up to 9,000 lbs.

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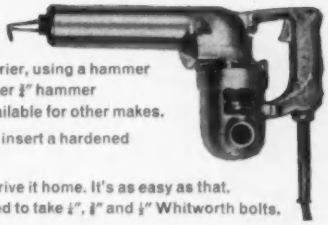

1 You drill the hole with the Terrier, using a hammer drill such as the Black & Decker ¾" hammer illustrated here. Adaptors available for other makes.

2 You withdraw the Terrier and insert a hardened steel plug at one end.

3 You replace the Terrier and drive it home. It's as easy as that. Terriers are internally threaded to take ¼", ⅜" and ½" Whitworth bolts.

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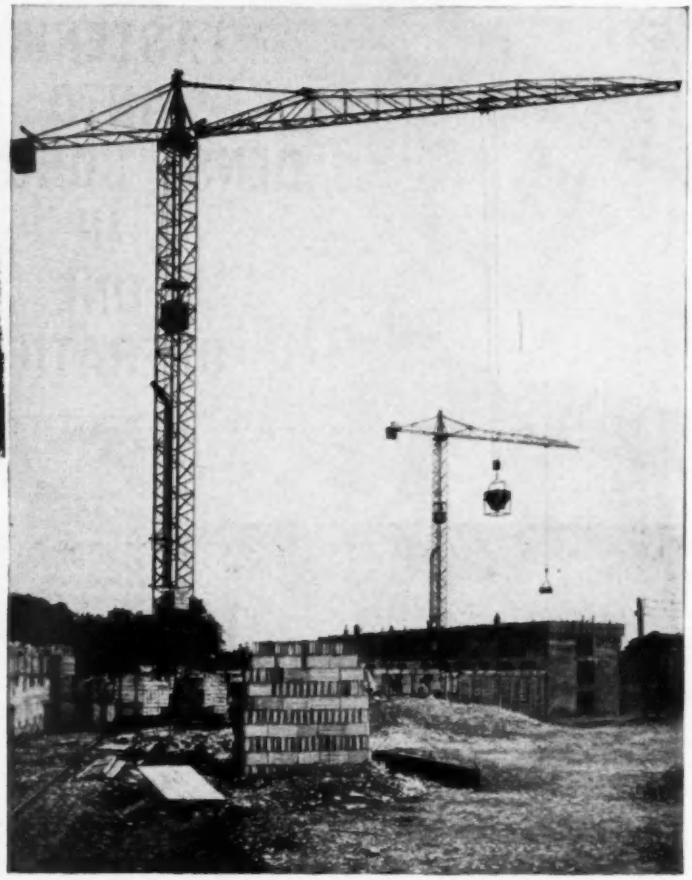

TYPE G 15 HV-A Available as a travelling, fixed-base, expendable-base, or climbing crane. Positive gear-drives throughout. Choice of 3 jib lengths:—

Safe working load	Jib lengths
Also available with a jib length of 80'.	
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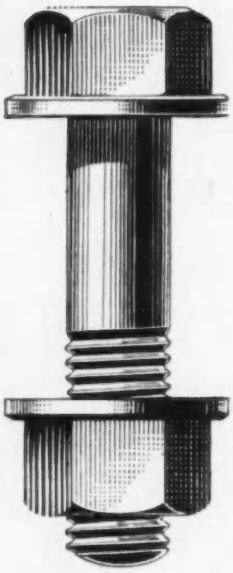

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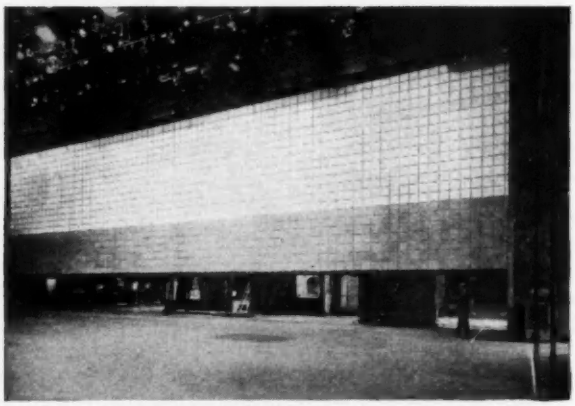

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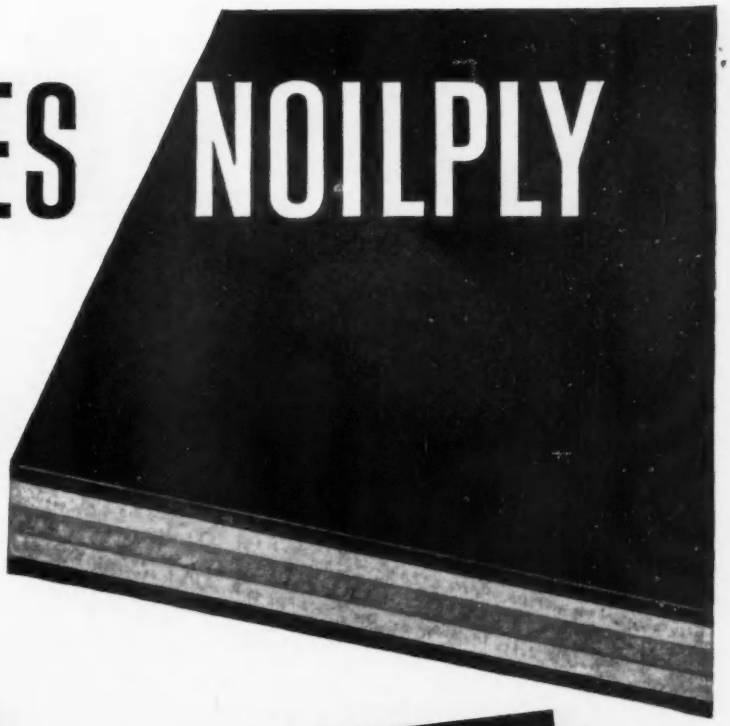

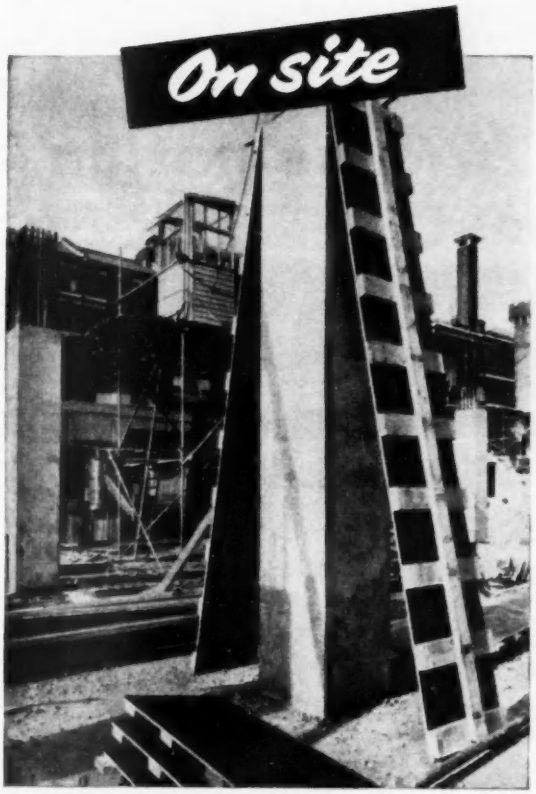

These 14 ft. columns for an office and warehouse block in City Road, London, were poured in one lift. Photo by courtesy of the contractors: HIGGS & HILL LTD., London.

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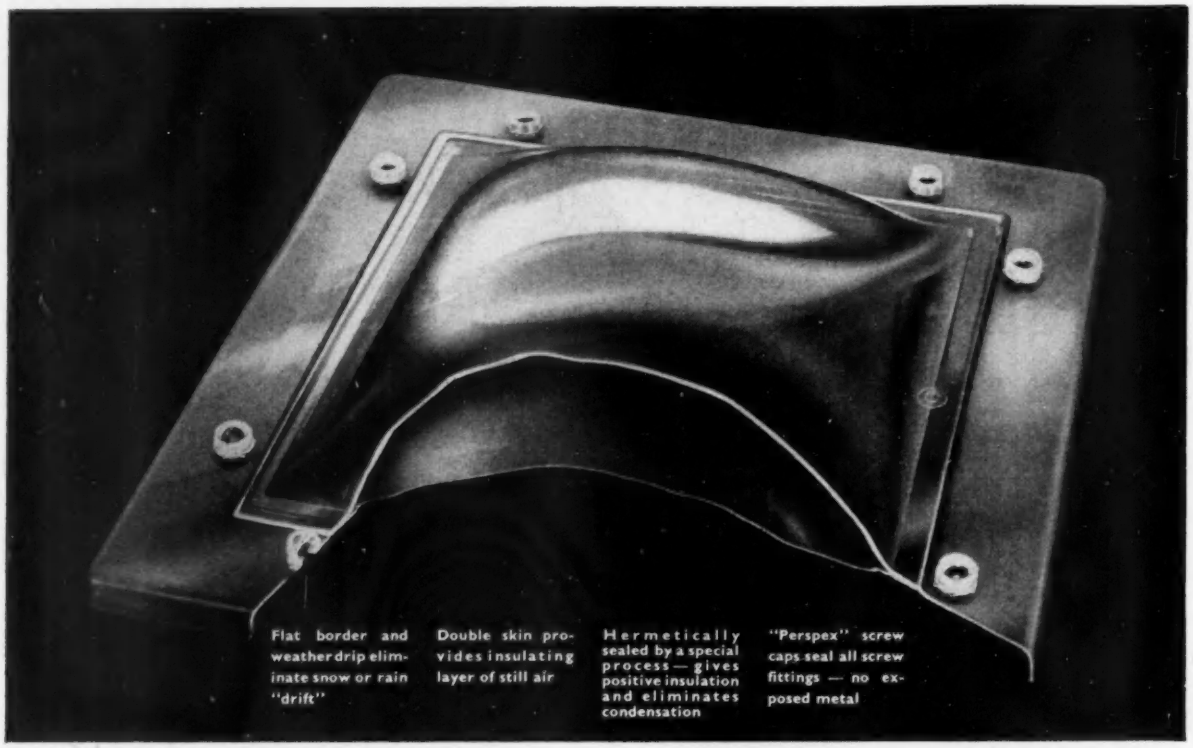

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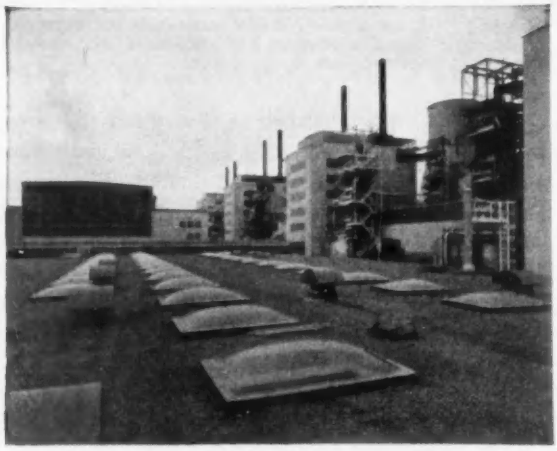

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P4405

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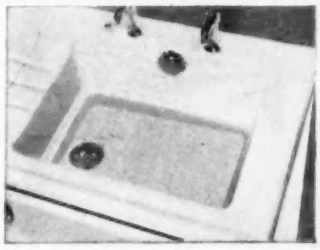
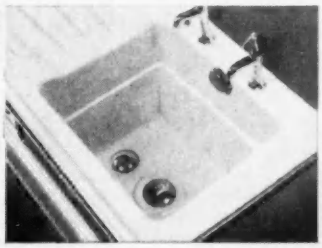
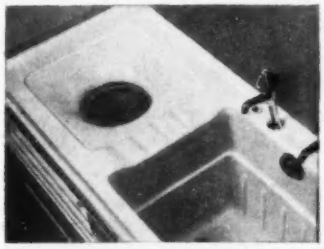


A water-sealed lift-out tray forms the sink base. The whole top is made from the toughest-ever combination of pressure-bonded resins, in depth-coloured white, blue or primrose.



With tray removed, showing 6 lb. cap. wash-tub, 3 Kw. heater grid, and boil-action gyrator. Overflow boss operates the pop-up drainer. Washer fills direct from the hot tap, saves on electricity.



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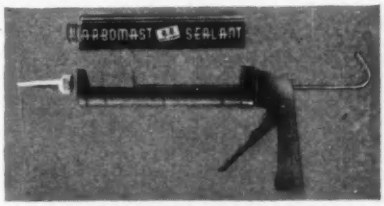

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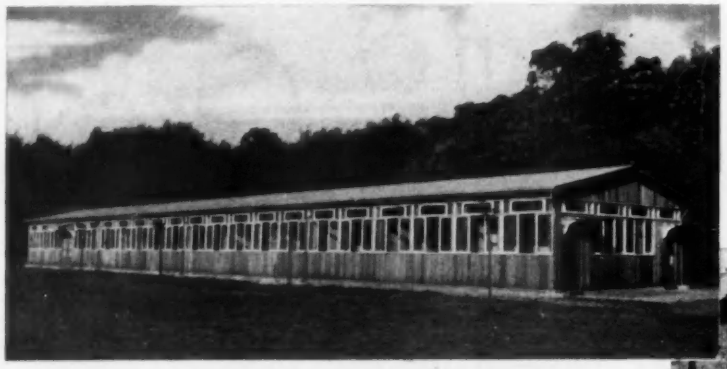

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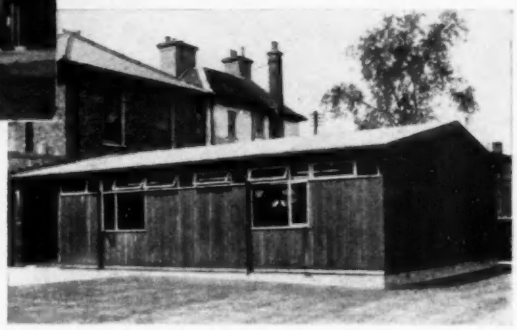

(*Above*) **CIVIL DEFENCE HEADQUARTERS, WALTON-ON-THAMES.**
Photograph by courtesy of The Engineer and Surveyor, Walton & Weybridge U.D.C.
(*Right*) **EXTENSION TO CENTRAL LIBRARY, SIDCUP, KENT.**
Photograph by courtesy of The Chislehurst & Sidcup U.D.C.

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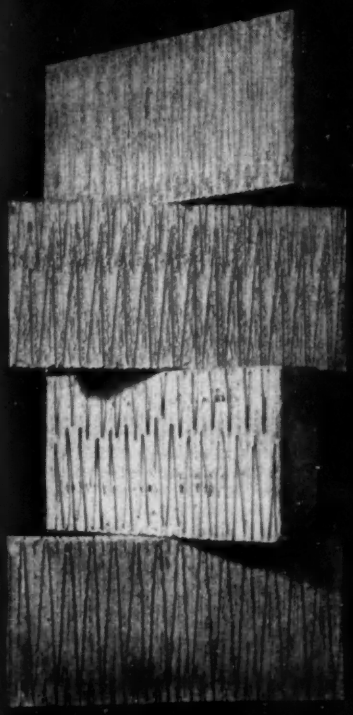

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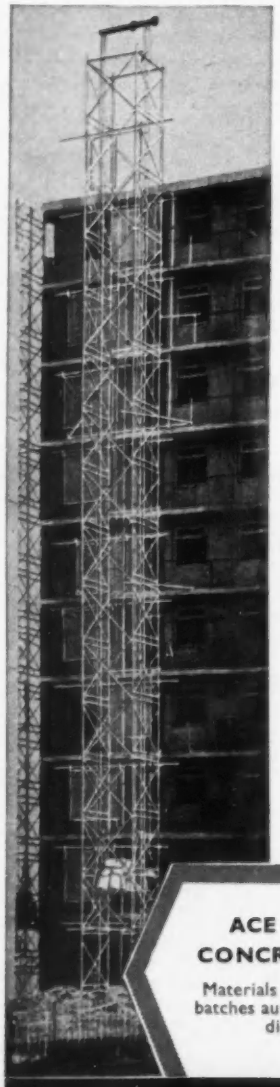

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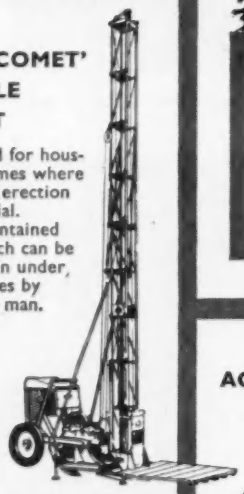

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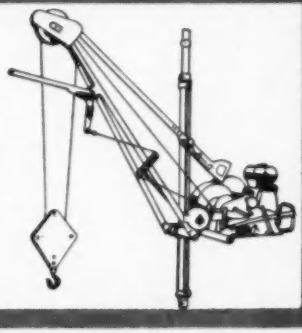

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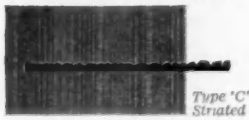

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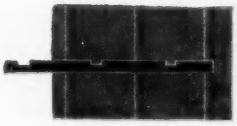

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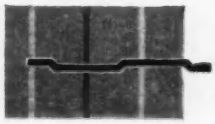

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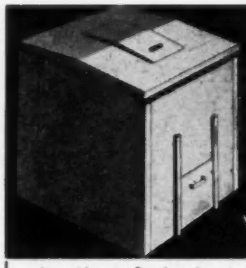

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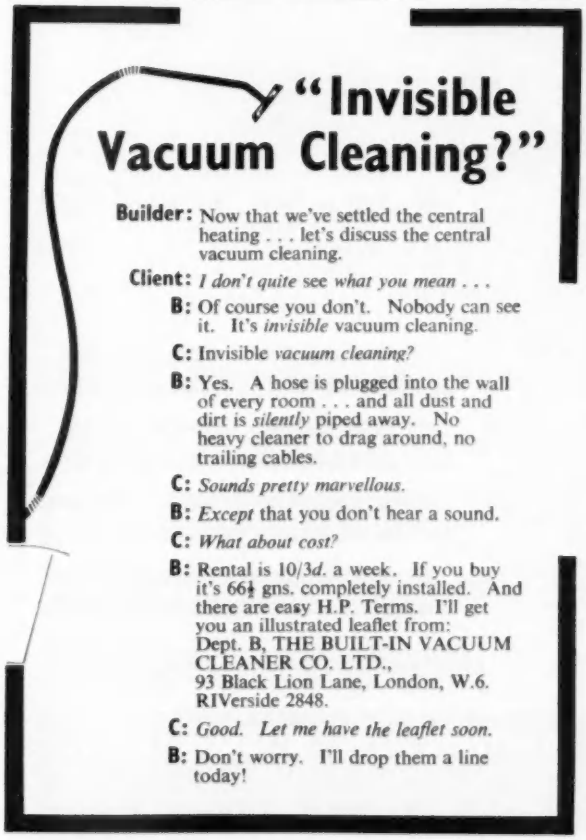

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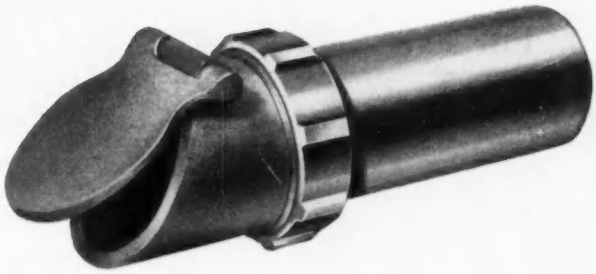

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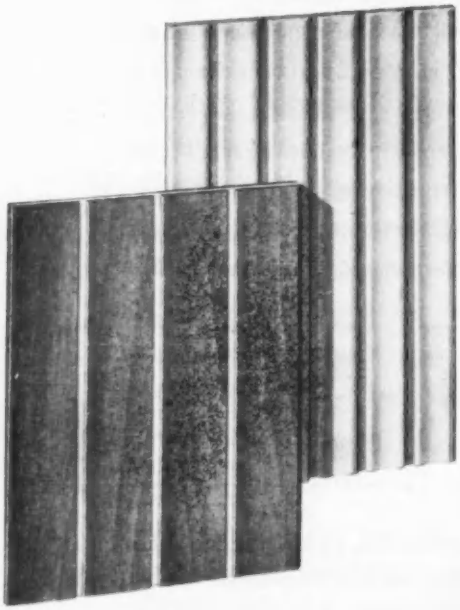

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96" long, 3¼" wide.

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Mahogany throughout 335.

Obeche face, Mahogany core 324.
Mahogany face, Obeche core 325.
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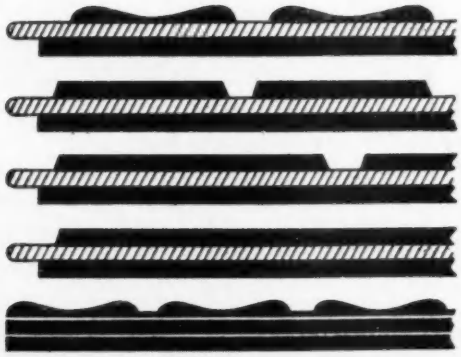
Obeche face, Mahogany core 326.
Mahogany face, Obeche core 327.
96" long, 3¼" wide.

Mahogany throughout 310.
96", 84", 72", 60" long, 24" wide.



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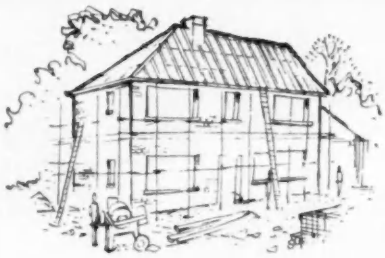

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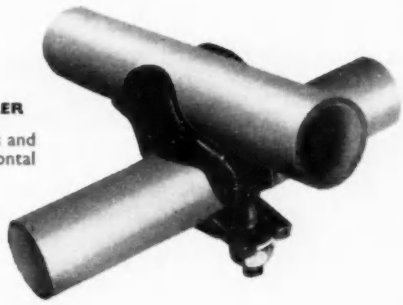
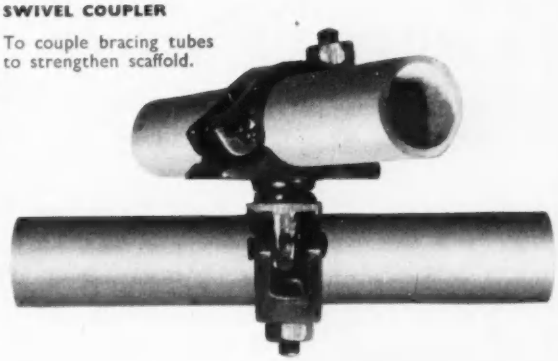


SWIVEL COUPLER

To couple bracing tubes to strengthen scaffold.

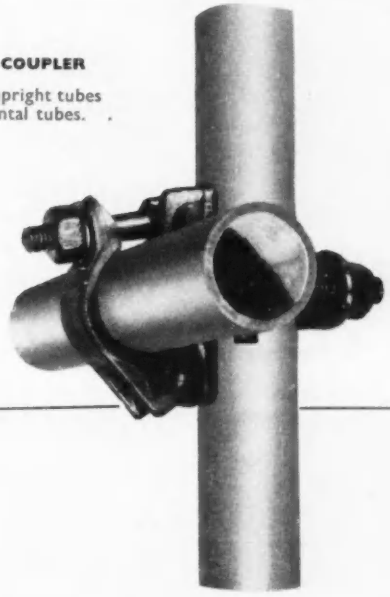


EXPANDING JOINT PIN

For joining tubes end to end.

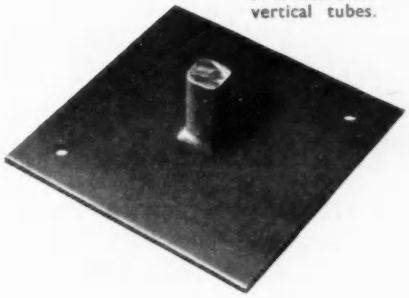
DOUBLE COUPLER

Couples upright tubes to horizontal tubes.



BASE PLATE

Foundation for vertical tubes.



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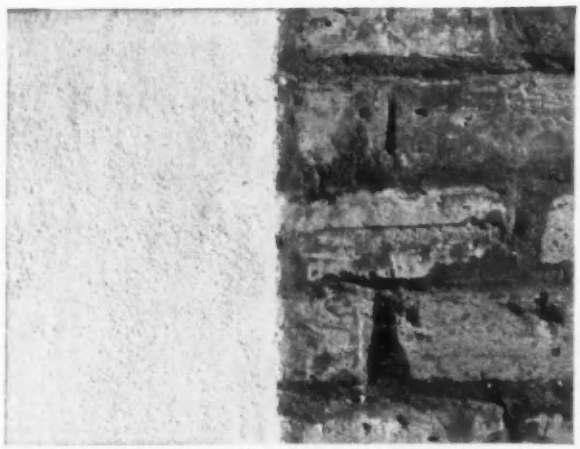

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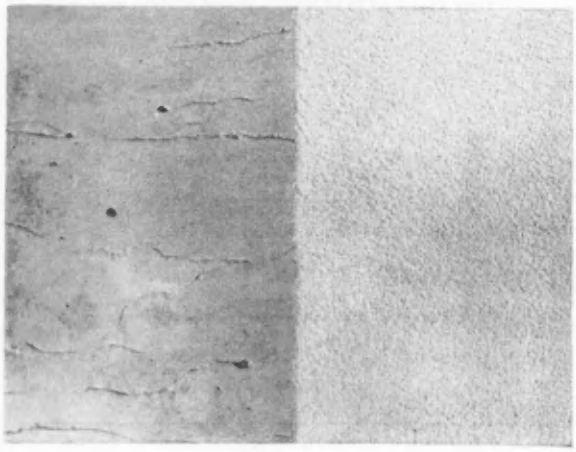

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News Summary

109 William Allen's three special articles on 'Windows and Glass Walls' conclude this week with 'The Interior View.'

112 The Royal West of England Academy School of Architecture is to be incorporated in a Bristol University School of Architecture.

114 Sir William Holford, in his latest report on Piccadilly Circus, argues that traffic considerations should not prejudice amenities and design in the redevelopment of the Circus.

115 The Institution of Municipal Engineers is to discontinue negotiations for a merger with the Institution of Civil Engineers, following the results of a poll.

116 Salaries increases of 10 to 12½ per cent for senior architects and other staff were recommended to the London County Council at its meeting on Tuesday.

117 Work of students at the Manchester School of Architecture is featured in this month's Students' Section.

122 The half-yearly meeting of the NFBTE is the subject of a special report.

126 A National Theatre on the South Bank looks more and more like becoming a reality, writes our Parliamentary Correspondent, thanks to the announcement by the Chancellor that the Government are prepared to give £1m. towards the capital cost plus an annual subvention.

129 Some important items of research being carried out in the new Materials Laboratory of the Building Research Station are described by a special correspondent.

'Late News' will be found overleaf, and 'News of the Week' on page 115

D

Late News

Competition News

Westminster Housing

THE ASSESSOR'S AWARD in the competition for designs for housing on the Lillington-street site, for Westminster city council will be announced by the Mayor of Westminster on Monday, July 24, at 12 noon, at Caxton Hall, SW1. The designs submitted will be on view from that time until noon on Saturday, July 29.

Railway Passenger Building, Tunis

FROM TWENTY DESIGNS submitted in the international competition for a railway passenger building in Tunis for the SNCFT, the assessors have selected that of the firm of Yves Roa, M. Rafoni, P. Kowatski and Jean L. Sarf, of Paris, with whom Richard Slama acted as consulting engineer. The second prize went to Kelemen Lazio, of Budapest. Third prize was shared between a Paris firm and a partnership from Warsaw.

Construction Equipment Exhibition

AT THE MEETING of the London County Council on Tuesday MR. EDGAR E. REED asked the chairman of the general purposes committee if she had any statement to make on the results of the international open-air exhibition of construction equipment held on the site of the Crystal Palace from June 15 to 24, 1961.

MRS. FREDA CORBET replied: 'This exhibition was the first to be held on the Crystal Palace site since the destruction of the Palace itself in 1936. The total attendance over the 10 days was about 33,000, many of whom were from overseas. The great majority of the exhibitors have expressed themselves as delighted with the tangible results of the exhibition, especially as regards increased inquiries from abroad. The Parliamentary Secretary to the Board of Trade in the House of Commons referred in glowing terms to the exhibition, which had enabled the Board of Trade to gain first-hand information about the transport problems at the Crystal Palace site. He added that it was an excellent exhibition site and that its future as such would be considered by all concerned.'

Motorway Contract Let

THE MINISTER OF TRANSPORT has accepted a tender submitted by Fitzpatrick and Son (Contractors) Ltd. of £459,104 for initial work on the Chiswick to Langley section of the London to south Wales motorway. The main purpose of the work is to reposition the two 30 ft. carriageways of the Great West-road between the Chiswick Flyover and Boston Park-road to allow for an 18 ft. central reservation on which the supports for the motorway viaduct will stand. The work is to be completed in 15 months.

The Builder

INCORPORATING ARCHITECTURE & THE BRITISH ARCHITECT

Vol. CCI. July 21st 1961 No. 6166

Published from 'The Builder' House, 4 Catherine-street, Aldwych, London, WC2. Telephones: Temple Bar 6251-4.

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Leading Article

National Federation Affairs

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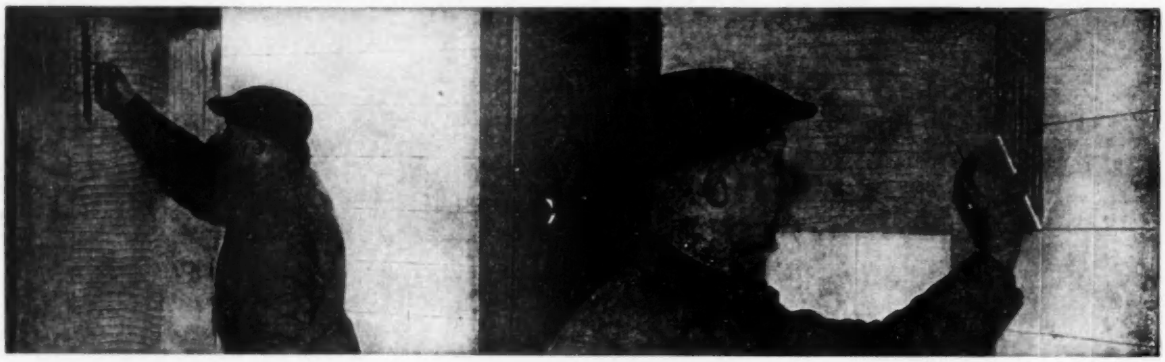

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Notes of the Week

Losses at Euston ; Standards in Housing Design ; RWA's New Status ; Arts & Crafts at the Central School ; Students' Photography at Regent Street

LOVERS of fine architecture, and especially of the monuments of the early railway age, will have been depressed to learn from a statement by Mr. Marples in the House of Commons that the historic buildings at Euston Station are to be demolished. The loss of the Doric Portal (still obstinately referred to as an 'arch'), and of the Great Hall (inspired by an interior in the Massimi Palace, Rome), both erected from the designs of Philip Hardwick, RA, in 1847, is particularly regrettable. The retention of these buildings has been found by the British Transport Commission and their independent advisers to be incompatible with the rebuilding of Euston main line and Underground Stations, and apparently, owing to the great cost involved, there is no hope of the Portal being re-erected on another part of the site.

We still hope it may be possible to find a way of preserving the Portal, at least. Unfortunately, such monumental features, so proudly set up by our ancestors, are nowadays apt to be regarded as hindrances to traffic—witness the by-passing of the screen at Hyde Park Corner and of the Wellington and Marble Arches—otherwise it might be suggested that the Portal could find an appropriate home at one of the at present undistinguished entrances to Hyde Park. Failing this, or the offer of a site for it elsewhere, we shall have to reconcile ourselves reluctantly to its disappearance. It is one of the ironies of our civilisation that while many architectural horrors seem indestructible the really fine things can be so easily swept away.

Standards in Housing Design

BLAME for low standards in housing design have for so long been laid at the feet of the private speculative builder that it was something of a shock to hear from Mr. Henry Brooke, the Housing Minister, that the judges in the 1961 good design in housing competition held by the Ministry in collaboration with the RIBA, had reported that, with the exception of the Midlands region, the average standard among schemes submitted was much lower than it should have been. The occasion was the presentation of the awards in the competition, made by Mr. Brooke at the RIBA on July 13, the point being that all entries were of course architect-designed. If there be any doubts on the need for a competition of this kind the judges' comments should dispel them.

There were 462 entries for the competition, 83 from private enterprise and 379 from public authorities, but Mr. Brooke said he hoped to have more entries from private enterprise next time. But despite the low average standard the quality of several of the private schemes was judged to be extremely good, and they won four of the nine awards. The local authority schemes which won awards were also considered to be of exceptional quality. Nevertheless, the low average standard attained confirms the feeling that house building has for too long been regarded as the Cinderella of architecture and building, both in design and finish, and these competitions will achieve their object if they help to stimulate a wider appreciation of the need for higher general standards in housing. The winning schemes were illustrated in 'The Builder' last week.

RWA's New Status

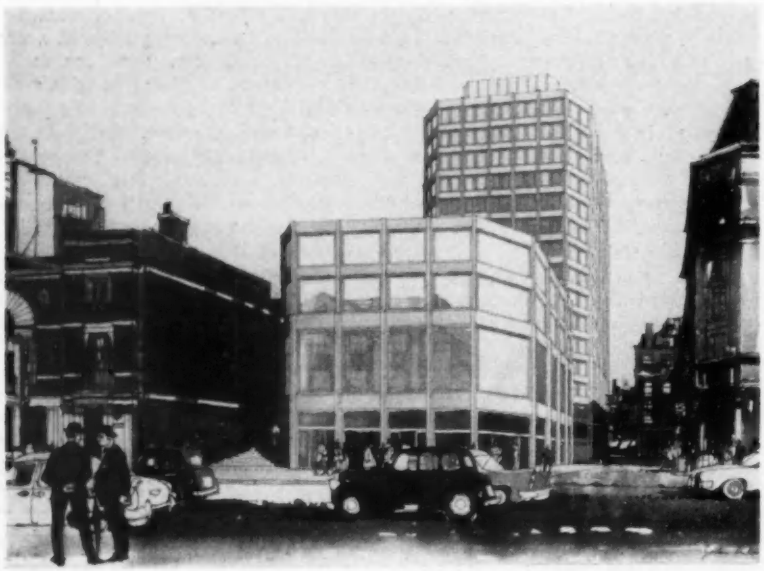
ARCHITECTS, especially those concerned directly with education and training, will receive with immense satisfaction the news that Bristol University is to establish a Chair of architecture. The present state of architectural education at Bristol is that some 250 students are currently under training at the Royal West of England Academy and the Department of Architecture and Building of the Bristol College of Technology. The RWA, which established its school of architecture in 1921, has done a splendid job over the past forty years and many of its past students are now in practice in the West Country and elsewhere—this year's president of the Bristol and Somerset Society of Architects, T. H. B. Burrough, studied there. It is fitting, therefore, that this school should be incorporated in the new university school and, in fact, form its nucleus.

It is a measure of the accepted importance of architects and architecture in the pattern of education generally and an acknowledgement of the wider academic scope necessary in the education of the architect that the new school will treat the subject as a broad academic discipline. Aside from subjects related technically to the profession, the school will draw upon the various university faculties concerned with such subjects as sociology, town planning and archaeology. From the official statement, reproduced in full elsewhere in this issue, it is noted that at least a year will elapse before a final agreement is implemented. We hope that no time will thereafter be wasted before the architectural students of Bristol are given university status with the added opportunities for study which this will bring.

Arts & Crafts at the Central School

'GOOD FUNDAMENTAL STUFF' was how one elderly beatnik described the exhibition of work recently concluded at the LCC Central School of Arts and Crafts, Southampton-row, London, WC. The display, opened by Paul Reilly, Director of the Council of Industrial Design, included examples of every conceivable art form except music, architecture and the written word. Of particular interest were some pieces produced by students of industrial design—one lighting appliance

ST. JAMES'S-STREET REDEVELOPMENT.—*A perspective of the new group of buildings to be erected in St. James's-street, SW1, sponsored by 'The Economist.' The scheme has received planning permission and the approval of the RFAC. The architects, Messrs. A. and P. Smithson, in association with Mr. Maurice Bebb, LRIBA, have opened up the interior of the site, forming within it a pedestrian piazza, with car park beneath. The 16-storey block will house 'The Economist' itself. The other buildings will be for shops, a bank and for residential use. Boodle's Club (left) is separated from one of the new buildings by a flight of steps and acquires a new south wall*



comprising a series of lights covered by slender indented cylindrical shades in an off-white, translucent plastic material, all supported on a central vertical rod, was particularly well done.

The examples of pottery showed good executive skill but little original design; some cutlery was undoubtedly as good as that which recently received a Design Centre award; and several excellent fabric designs were on view. One large and gaudy wall mural, splendid for an exhibition back-cloth or a Chelsea coffee bar, and some promising pieces of sculpture also caught the eye. The exhibition showed that the general standard of the Central School is still very high, though one felt that the first-class execution, especially in the fields of pottery, silverware, and industrial design, had the ascendancy over design. 'Good fundamental stuff' indeed.

Students' Photography at Regent Street

PUBLIC AWARENESS of architecture is undoubtedly due to the increased publicity given through the medium of photography, and this in turn has resulted in a marked improvement of architectural photography. For the second year in succession one of the notable features of the annual exhibition of work by students of the Regent-street Polytechnic School of Photography is the excellent selection of first-class pictures of buildings. Architecture seems no longer to be considered merely as a background for a pretty girl or some other incidental activity, although, of course, such pictures are both desirable and fully represented at the exhibition. Detail, texture, and sensitive lighting are shown in a well-thought-out series of the Carmelite Church in Kensington by one third-year student—some particularly difficult sculptured reliefs are shown and there are some very good details of the vaulted church roof. Modern building, which, by its lack of extraneous ornament, is extremely flat and uninteresting if photographed badly, is well represented. Sculpture was the subject chosen by one, Belski, a second-year student, and in a series entitled 'Symphony on a Theme' he has photographed a group of horses from several dramatic angles. Miss Margaret Harker, the principal of the school, and her staff can again congratulate themselves on another productive year.

Poet's Corner

IN THE HOUSE OF COMMONS last week Mr. Marples announced that the historic buildings at Euston Station, including the Doric Portal, are to be demolished.

Some monuments may give us frights,
But others rank as moving sights;
And, as you've probably inferred,
'Moving' 's the operative word.
At Theobalds Park, in Herts. afar,
They re-erected Temple Bar;
The Marble Arch, I beg you mark,
Went from St. James's to Hyde Park;
Statues too numerous to trace
Have moved about from place to place.
But Euston's Gate must be destroyed!
Here is an outrage to avoid.
The Government should act aright
And move it to another site.

ANON.

Letters to the Editor

Mean-mindedness over Euston ; The Genius of John Rennie ; The Case for Fibrous Plaster

SIR,—The destruction of the Doric portico at Euston station has now been approved, with some rather unconvincing official tears of mourning. The money, we are told, cannot be found for preserving or re-erecting a superb monument. How often has that story of insensitive mean-mindedness been on the lips of 'Government spokesmen'? Would any other country in Europe permit the demolition of such a landmark in architectural history? Hardwick's arch was built between 1835 and 1837 and is one of the finest examples of early railway architecture, when the classic tradition in design was still a vital inspiration.

JOHN GLOAG,
President, Society of Architectural Historians of Great Britain,
3 The Mall, SW14.

'The Genius of John Rennie'

SIR,—The article published in your issue of June 23 last conveys an erroneous account of the part played by John Rennie in the construction of the docks now owned by the Port of London Authority.

Prior to 1800 the port facilities consisted mainly of open quays, though there were two small docks at Rotherhithe and Blackwall. In 1799 the West India Dock Company commenced to build their docks under the direction of Ralph Walker and a year later John Rennie was appointed Engineer to the newly created London Dock Company, a position that he occupied until his death twenty years later. Subsequently Walker and Rennie collaborated in the construction of the much smaller East India Docks.

G. A. WILSON, Chief Engineer,
Port of London Authority, EC3.

The Case for Fibrous Plaster

SIR,—I should like to add my tribute to the use of fibrous plaster. Between the two wars, I supervised an important contract in Cambridge where the roofs of the galleries were covered with moulded fibrous plaster on concrete. Following this I supervised the erection of the largest railway hotel in the North; here the cornices in all the rooms were executed in fibrous plaster at a much lower cost than had they been solid work. All the reception rooms had heavy mouldings for the concealed strip lighting. Perhaps the largest job was the great concourse of the railway station; the fibrous plaster for this was cast on the site. To go back further I remember the White City Exhibition. I certainly recommend the use of this material to architects young or old.

G. W. HARRIS [FICW],
43 Leopold-road, NW10.

'. . . I thank my fortune for it,
My ventures are not in one bottom trusted,
Nor to one place; . . .'

The National Theatre

LCC Welcomes the Chancellor's Proposal

THE LONDON COUNTY COUNCIL'S general purposes committee reported to the Council on Tuesday (July 18) on the Chancellor of the Exchequer's offer of grant of £1m. from Government funds towards the establishment of a National Theatre on the South Bank. The substance of the Chancellor's proposals is reported in 'The Week in Parliament' on page 126.

'The Chancellor's proposals,' says the committee's report, 'have been communicated to the bodies concerned and we hope it will not be long before information is available about their response. We feel sure that the Council will wholeheartedly welcome and accept the opportunity now offered. We are consulting the Finance Committee. We recommend:

'That the Council is prepared to participate in the establishment of a National Theatre on the South Bank, Lambeth upon the submission by the Joint Council for the National Theatre of a scheme, acceptable to the Council and to the Government, for the creation of such a theatre which assumes as a basis—

'(1) Participation by the Royal Victoria Hall (the "Old Vic"), the Royal Shakespeare theatre and Sadler's Wells;

'(2) contributions towards the capital costs of £1m. by the Government and by the Council of the balance of expenditure of the order of £1,300,000;

'(3) subvention by the Government of the companies using the theatre and the continuance of the Council's contribution to Sadler's Wells opera; and

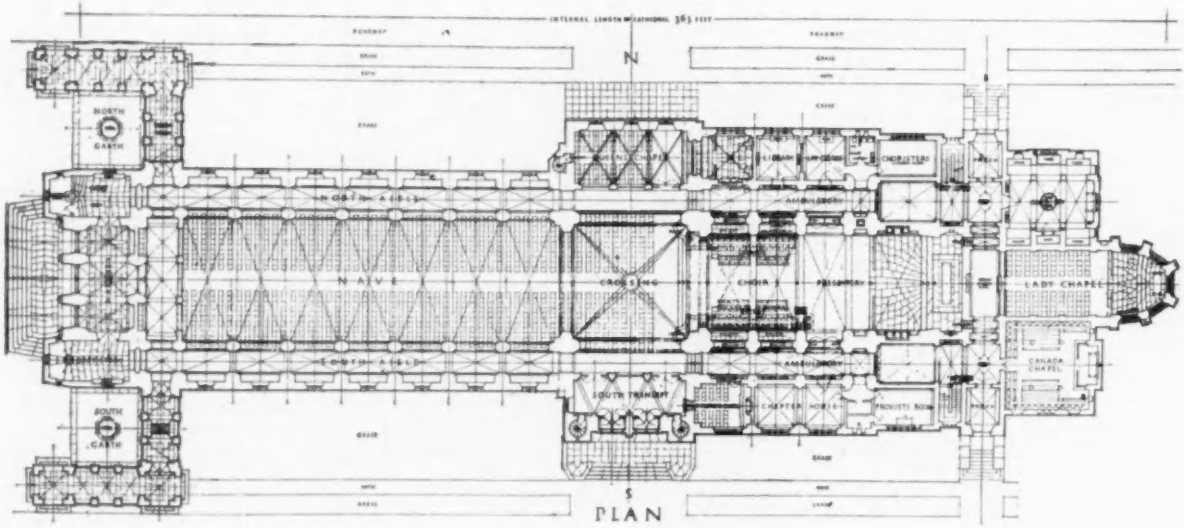
'(4) adequate representation by the Council and the Government on any managing body.'

Change of Address

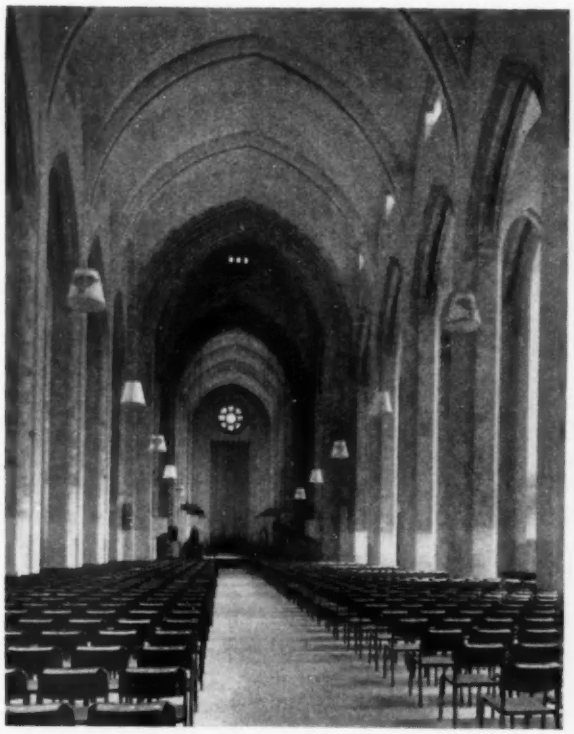
THE CHIEF ARCHITECT AND SURVEYOR to the Metropolitan Police has moved to the Office of the Receiver for the Metropolitan Police District, Tintagel House, Albert Embankment, SE1 (tel: Whitehall 1212, extension Tintagel 224).

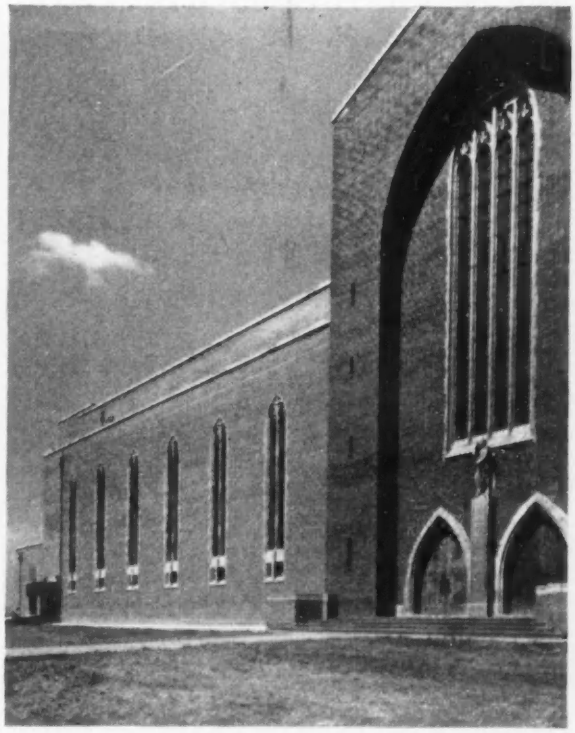
Progress on Guildford Cathedral

SIR EDWARD MAUFE, RA, architect
DOVE BROTHERS LTD., general contractors



PLAN



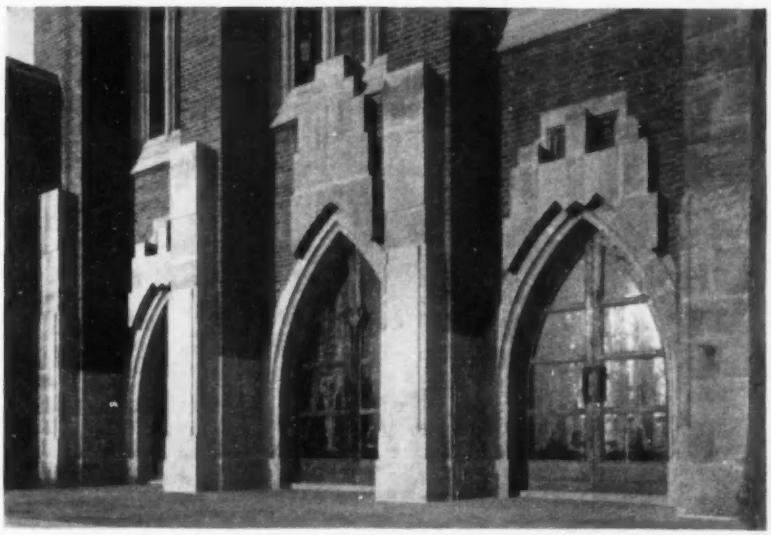


Facing page, the west end which will eventually be flanked by a north and a south garth. Above left, the nave looking east towards the choir and presbytery. Above right, entrance to the south transept and windows to the south aisle. Below, view of the west entrances. The glazed doors have etched representations of religious figures

PROGRESS on Guildford Cathedral since 1954, when the choir and transepts were finished, consists of building the nave and furnishing the church ready for services to be held. Over £540,000 has so far been collected for the Cathedral and a further £200,000 is required. This would be expended on building a Sacristy (£22,700), a Lady Chapel (£46,500), the garths on each side of the west entrance (£42,000) and on completing the tower (£95,000).

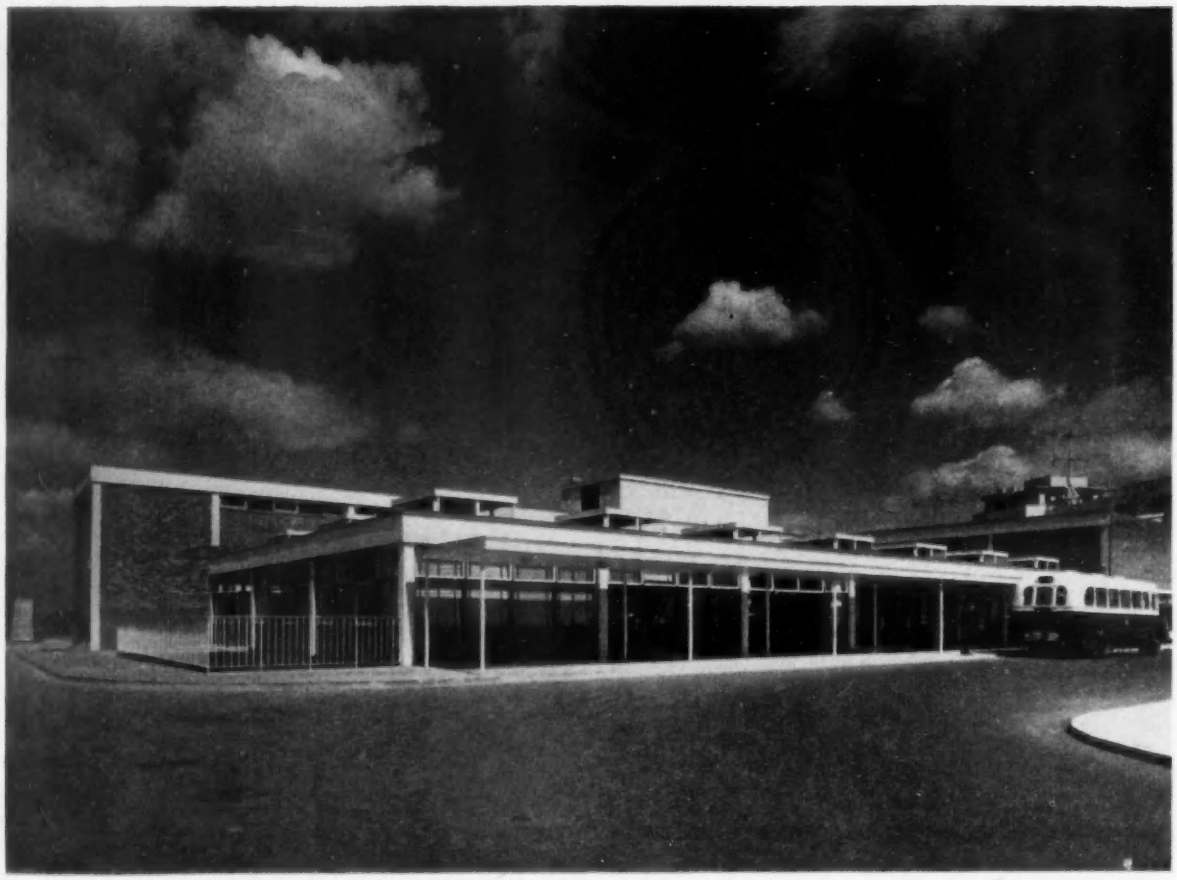
A gift of 8 pieces of plate, the work of young designers in contemporary style, was made by the Goldsmiths' Company for the consecration ceremony.

A loudspeaker system has been installed to relay the services evenly throughout the church. Where possible, the loudspeaker units are designed as integral parts of the suspended lighting fittings. Sound reinforcement in the nave is achieved by slot diffuser speakers mounted on the columns. Cabling is concealed in the building fabric. The system was designed by Standard Telephones and Cables Ltd., and the electrical contractors were Barlow and Young Ltd.



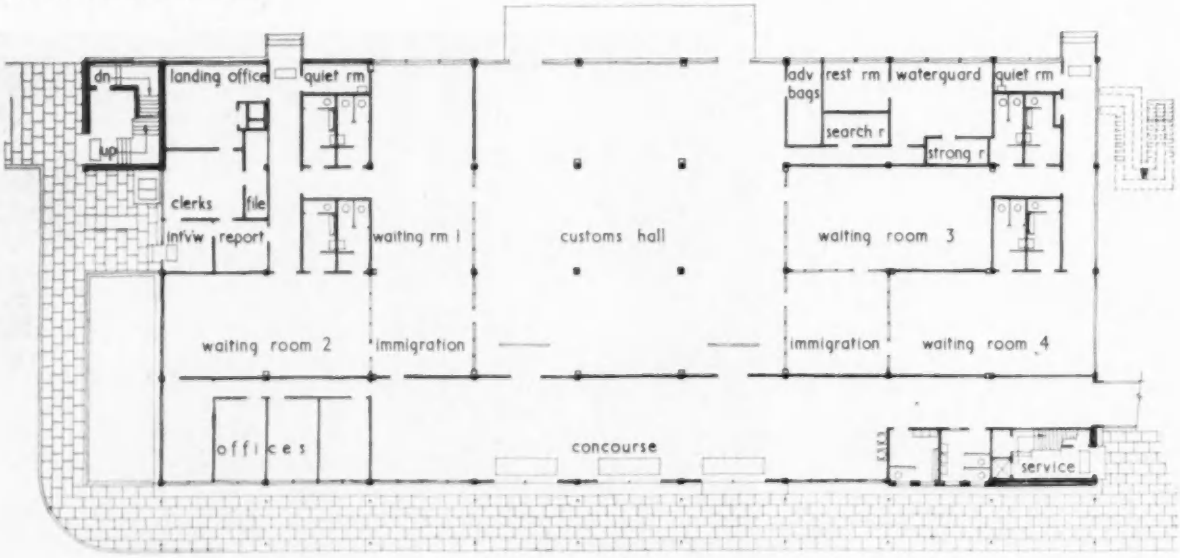
Extension to Birmingham Airport

NORMAN & DAWBARN, architects and consulting engineers
in association with the Ministry of Aviation
WILSON LOVATT & SONS LTD., general contractors



concourse side of the terminal building

GROUND FLOOR, Scale: 1 in. = 32 ft.



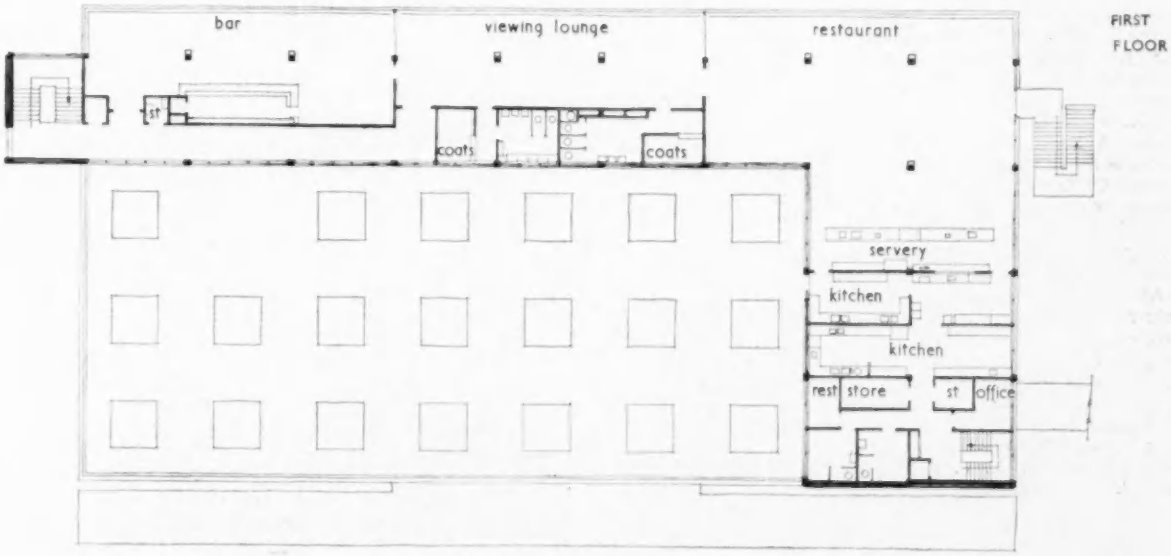
THE ORIGINAL terminal building, at Elmdon Airport, was designed by the architects in 1937 as a passenger handling building with a restaurant and a private flying club. Its design included two large concrete canopies under which passengers embarked and disembarked from the aircraft.

The traffic dealt with at the airport increased so much that greatly enlarged facilities were required. The new extension had to be designed in relation to a new apron extension which was laid out by the Ministry of Aviation. This apron is parallel to the main runway and is at an angle of approximately 57 degrees to the axis of the existing building.

The new building has had to form a part of the general passenger handling at the airport and is not a self-contained unit. It has also had to be designed so that the airport remained fully operational during the building contract and therefore the new extension has been completed before alterations to the existing building are started.

Briefly, the principles of passenger handling once the whole scheme is completed will be that all departing passengers enter the existing building. The ground floor of the building will be converted into a large concourse with ticketing offices. International departure passengers

airport side of the terminal building



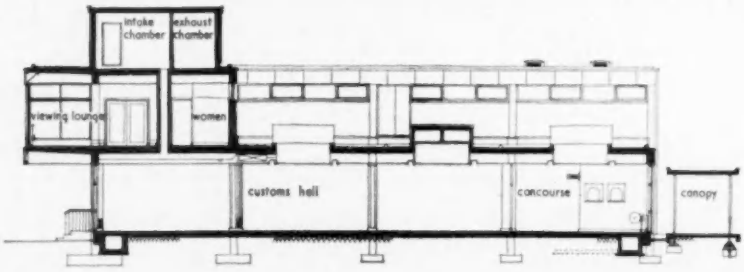
progress to the new building by an enclosed walkway, whilst domestic flight passengers walk straight from the concourse onto the domestic apron on the east side of the existing building. International arrival passengers use the new building only and do not need to go into the existing building unless they wish to go into the main concourse for ticket inquiries or domestic flights.

The first floor of the new building provides a public restaurant and bar which can be used for public functions as well as for visitors to the airport. Access to this floor is by a staircase leading from the public enclosure area at ground level.

The building has been designed as a simple rectangle with the possibility of further extensions at the west end, and the ground floor has been arranged so that alterations to the internal planning can be carried out as simply as possible.

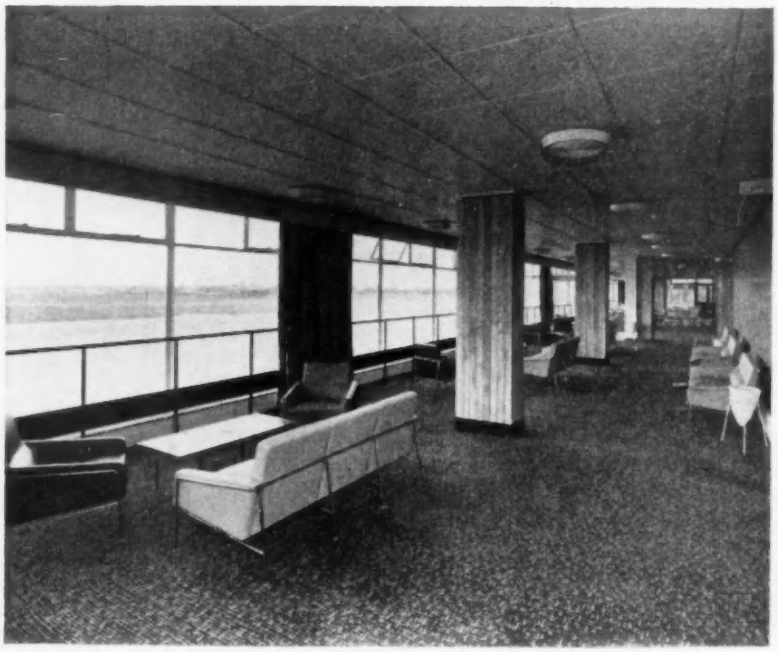
Furnishing scheme and decoration: City of Birmingham Architect's Dept.; heating consultants: Roger Preston & Partners.

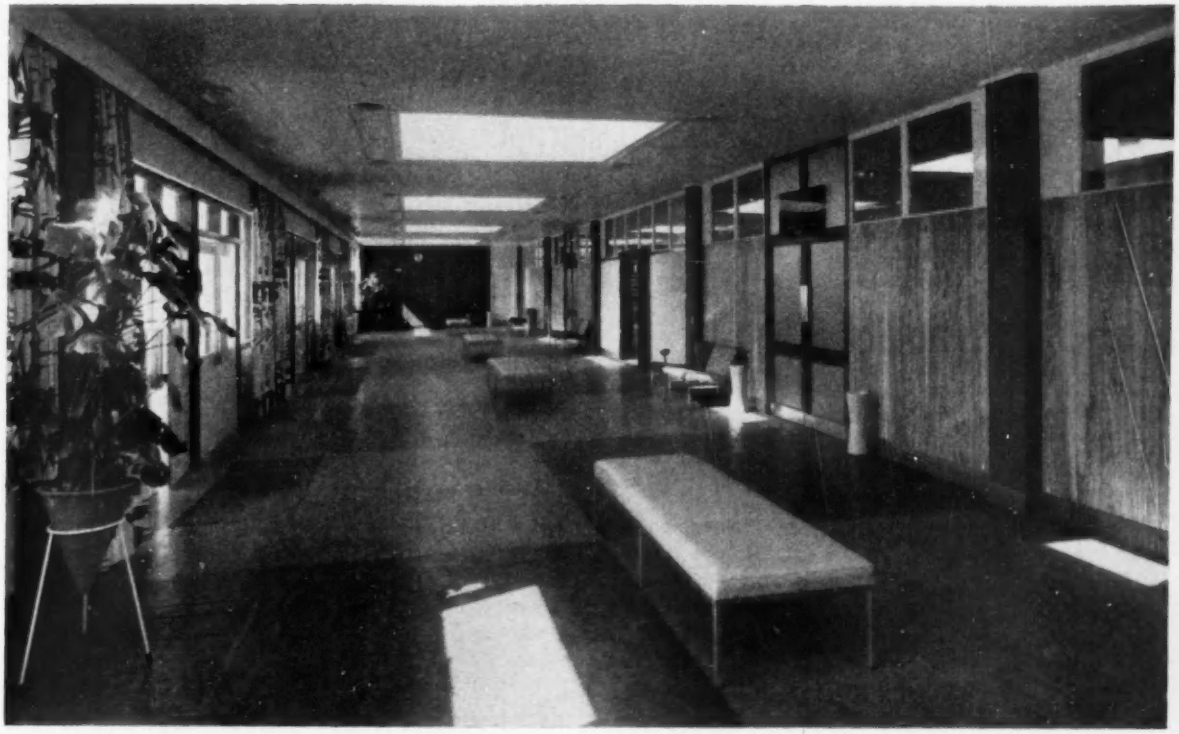
Above, international passengers' arrival lounge. Below, the public viewing lounge at first floor. Right, cross section, scale: 1 in. = 24 ft.



sub-contractors & suppliers:

Pyrok treatment: Pyrok Contracts Ltd.; *plumbing:* David Wiseman & Sons Ltd.; *tarmacadam:* Constable Hart & Co. Ltd.; *suspended ceilings:* The Darlington Insulation Co. Ltd.; *asphalting and felt roofing:* Ragusa Asphalte Paving Co. Ltd.; *counter gates:* Bolton Gate Co. Ltd.; *plastering & granolithic:* W. H. Richardson; *painting:* Alfred Bagnall & Sons Ltd.; *glazing:* W. B. Tatlow & Sons Ltd.; *floor & wall tiling:* Bryon & Co. Ltd.; *electrical installation:* Electra (Birmingham 1935) Ltd.; *roof lights:* Hills (West Bromwich) Ltd.; *terrazzo paving:* Roman Mosaic Ltd.; *metal windows:* Metal Casements Ltd.; *lino & tile cork paving:* Marbello & Durus Ltd.; *steel doors:* Williams & Williams Ltd.; *electrical beer unit:* W. R. Loftus Ltd.; *bar & kitchen hoists:* Wm. Wadsworth & Sons Ltd.; *heating, hot water & ventilating services:* J. C. Toogood Ltd.; *partitions:* Austins of East Ham Ltd.; *flooring:* Granwood Flooring Co. Ltd.; *ironmongery:* N. F. Ramsey & Co. Ltd.



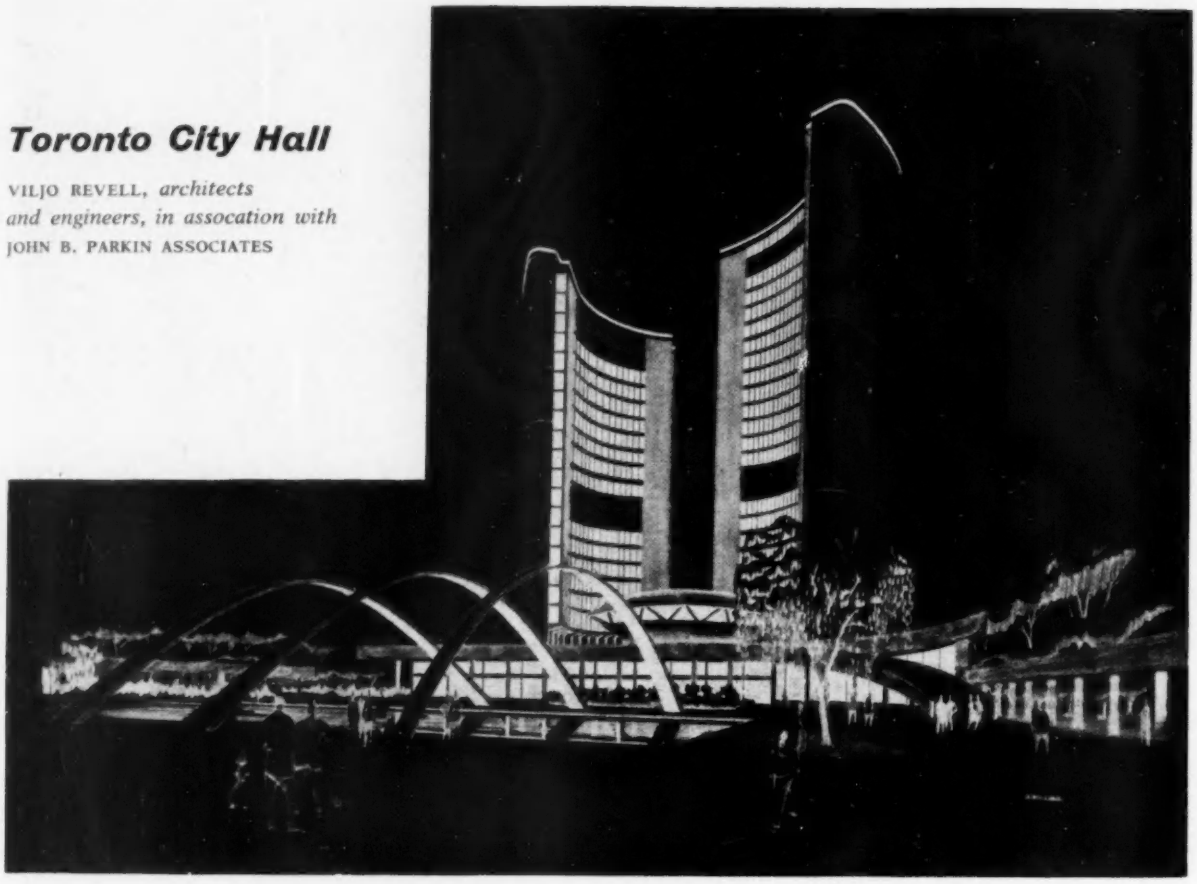


Above, ground floor main concourse. Right, the bar seen from the public viewing lounge. Below, the public restaurant which is entered from the viewing lounge

Birmingham Airport

Toronto City Hall

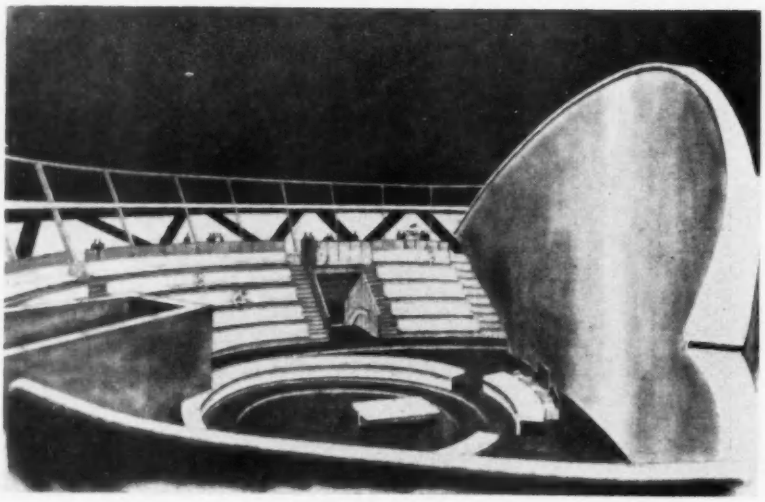
VILJO REVELL, *architects and engineers, in assocation with*
JOHN B. PARKIN ASSOCIATES



view from driveway entering the civic square

THE VIEW ABOVE of the proposed City Hall at Toronto, Canada, is from a vantage point in the driveway entering the civic square at the corner of Queen and Bay streets. The podium roof on ceremonial occasions becomes the place of entry to the council chamber—the car ramp can be seen in the foreground leading up to that level. The council chamber can be reached also from below, through the public access area. The main entrance to this can be seen on the level of the civic square. To the left is the reflecting pool which, during winter months, can be transformed into a public skating rink. The reinforced concrete arches provide the essential means of lighting the rink and the pool. A new Cenotaph is planned just in front of the podium.

council chamber from gallery



The council chamber, shown left, has a circular plan, the curving screen dividing the chamber itself from the main members' lounge. Beneath the members' lounge is an ante-room leading to the chamber. The council members' seating is planned in a ring in the centre of the chamber with tiered public seating arranged at a reasonable distance behind. Around the latter a gallery walkway is provided from which level the view shown is taken. From this gallery there is a view to the podium roof and the civic square beyond. The whole area is covered by an acoustically treated reinforced concrete dome, lit by dome lights and downlights.

Private offices, adjacent to the open general office space at the front, look out through glass walls. There are 20 such floors in the east tower and 14 in the west, but technical, observation and podium floors bring the total heights to the equivalent of 22 and 28 storeys.

The public access area can be reached on foot from the civic square or by car from a lower level. The rotunda also serves as a place of entry, by means of elevators, to the council chamber and the civic departments within the towers. The centre of the rotunda will include a Hall of Memory in which will be located the Golden Book of Remembrance.

The Impact of Science Upon Architecture

Windows and Glass Walls

3.—The Interior View

BY WILLIAM ALLEN, BARCH, ARIBA

This is the concluding article in a series of three dealing with glass and windows. What we feel and think about architecture is mainly determined by what we see, and it is important therefore to try to understand the ways in which visual characteristics of design become the instruments of our influence upon people. Openings for daylight are very significant elements of design both in respect of how as individual glass areas they are designed, and the part they play in the scheme as a whole. The preceding article discussed them as part of the problem of external design and they will be considered here in respect of the interior. While such a division cannot be made for design, it is convenient for an analytical discussion.

Adaptation

IF WE STAND OUTDOORS during daytime the interior of a building usually looks dark through its windows. If we go indoors we often scarcely notice the drop in illumination and almost at once we see quite well; but a change has taken place in our eyes which is known as adaptation. This consists principally of an enlargement in the size of the iris admitting light at the front of the eye and an increased sensitivity in the photochemical functioning of the retina at the back, where the image of the view is formed.

When we are adapted to outdoor conditions we seldom notice any feeling that the brightness of the sky is uncomfortable, but when we are adapted down to interior levels of illumination the brightness of the sky seen through the windows can be very uncomfortable in some circumstances. The condition is referred to as 'glare'; and if you are subjected to glare of this kind for any length of time you usually feel tired.

The risk and severity vary in ways important for design. The restaurant of the Royal Festival Hall has a glass wall. As a room it is not very deep and its decorations are fairly light; consequently it is bright and one is so nearly adapted to outdoor conditions that the sky seldom seems uncomfortable. The situation is helped by the framing system for the glass which acts like a louvre system to limit and soften the view of sky as one looks along the room.

In a factory, where people will be farther inside, and the surroundings are darker, a similar glass wall would be uncomfortable, perhaps almost intolerable. Numerous cases of this kind are known and experience of them was part of the background from which the vision strip —a long low stretch of window—was developed for factories in place of glass walls. The view through a vision strip is usually of things much less bright than the sky.

At the opposite extreme to such a place as the Festival Hall restaurant, imagine a little medieval cell, with small leaded windows set deep in splayed openings. Illumination levels would be very low and the walls would not be bright; yet one would probably be able to see quite well, and conditions could be very comfortable because the deep reveals would screen the bright views of the outdoors and the eyes could adapt very fully. It might be hard to read or do fine work because of the low illumination, but that is a separate issue. What we are considering at the moment is people's feelings and sense of being able to see comfortably.

One finds something of this sort on a grander scale in the Great Hall of Fontainebleau, where six large windows are set in deep reveals, three to each side, out of sight as one looks along the Hall. The wall finishes are not very light, but conditions for adaptation are good, and the place appears almost luminous at times.

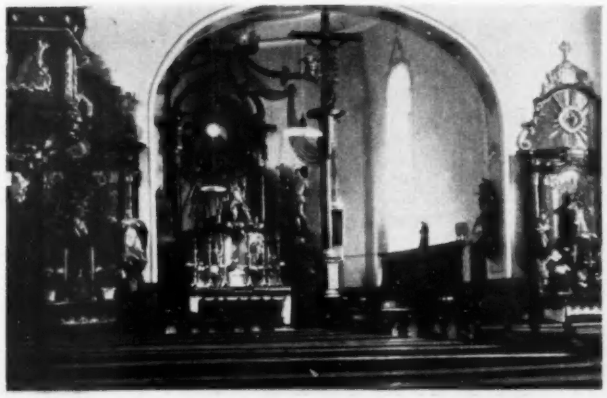
All this is not to suggest that views outdoors are to be avoided; closer linking of indoors and out has been one of the interesting objectives of modern design, exploiting contemporary developments in structural virtuosity. But the discussion has served to introduce adaptation, especially the point that when you are adapted down to indoor conditions, views of sky outdoors can become a major factor in design to be remembered by architects.

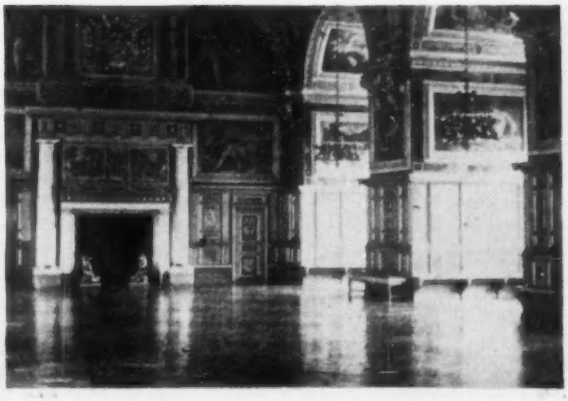
Dealing with Discomfort

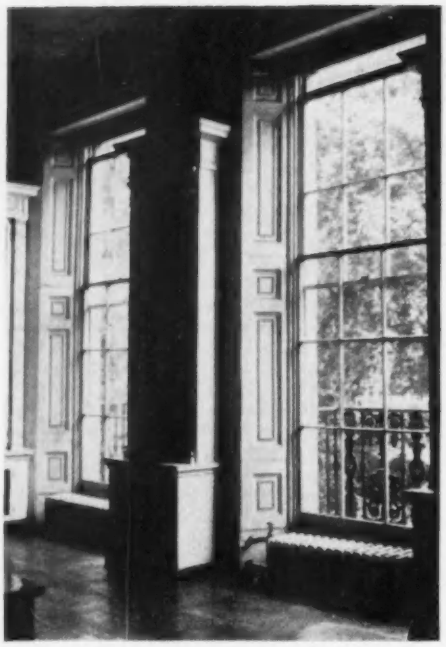
This is where window design tests architectural skill and understanding, for discomfort-glare is controllable and ought to be controlled. If sensitivity in design means anything, it means just this kind of approach and always has, for the need to satisfy the human sensory system is one of the fundamental forces in design, constantly present to influence opinion as between good and bad. Successful traditional design and successful modern work both bear this out. *Securus judicat orbis terrarum;* the general judgment of mankind is sure.

It is largely a question of how you deal with contrasts, how extreme they are, whether the dark and the light are adjacent or separated, and the relative areas of light and dark. A kind of situation which can be very unpleasant is the use of smallish windows high up on a poorly lighted wall. The view of sky is at its brightest and the wall is dark. This sort of thing, done more often for external

Left: Stimulation by mild glare; a tiny 'eye' of a window over the altar, the sanctuary itself lit from the side. (Photo. H. L. Gloag.) Right: Fontainebleau: recessed windows and deep reveals at their most magnificent; a wonderfully, comfortably luminous room







Left: Graded brightness from outer reveal to inner splay. Thin white bars and frame minimise contrasts. Very comfortable and good view. Functionally speaking, almost perfect. Below: Views of sky through holes in dark walls. Risky, too large to be mere sparkle; relieved here by splayed reveals

ornament than internal use, is to all intents and purposes a failure.

If the severity of contrast is reduced, either by ensuring that the view is of something only moderately bright, or by lighting the darker surfaces, a perfectly sound basis for comfortable window design is found. And if the gradient from light to dark is made less abrupt, discomfort is greatly reduced. The architectural devices for doing this are numerous, because it is one of the problems which has had to be solved in every new phase of architecture.

No way of designing can escape these demands because of the force of the sensory system's abhorrence of prolonged discomfort. The problem at this moment of history is to understand the principles involved and how they have been dealt with previously so that the innumerable new situations facing us can be anticipated and dealt with as our way of design develops.

Go back for a moment to the example from Fontainebleau. If one turns to face one of its windows, it is found that the whole recess is bright by inter-reflection, so that the view of sky is not seen beside any dark area. If you move into the recess, one's adaptation to the surrounding brightness is such that the sky seems in no way uncomfortable.

The Merits of Splays

The medieval splayed reveals in their deep walls, and the continuation of this practice into the Renaissance with its use of shutters folded back, was an expression of the same idea. At first glance splays may seem simply a device to enable light to spread better, and for small windows in deep walls of course it was useful in this way; but it had the merit at the same time that the contrast between the surface of the splay and the shadowed inner face of the wall was easier and therefore more pleasant than if the reveal and the wall surface were square to one another. In Britain an added touch was often given by whitening the outer reveal where otherwise there would have been the darkness of sooted brick in the worst possible place for uncomfortable contrasts. The practice has other merits—it is a frame, with all the freedom-giving merits of a frame in design, and it gives an elegant sharpness to a way of design that often calls for it.

Naturally things of this kind did not develop because of some specific analysis such as has been made here; people simply reacted to feelings. But the consistence of their reaction is the evidence of importance for the principle. Today our holes-in-walls on the whole are coarse, square-cut into our thin walls, sometimes not too uncomfortable if the surroundings are bright, and otherwise often unpleasant, occasionally even brutal. Often what has saved us from trouble has been the development of wall-to-wall glazing, partly the result of a desire to express clearly the difference between structural frame and non-structural outer wall, and partly to meet the need for contrast-free conditions. Often this kind of glazing arouses readily the reaction that the lighting of a space is good. In fact it is scarcely different from what it would be with large holes-in-walls, but it has this appreciated freedom from contrast.

It is curious to think that some of the least successful fenestration of our times has been the 'Georgianesque' which bears some resemblance to a tradition with scarcely any of its basis for success; also the very large hole-in-wall, its largeness a concession to various modern influences, but leading to the worst discomforts in its combination of a large view of sky with a frame of dark shadowed walls.

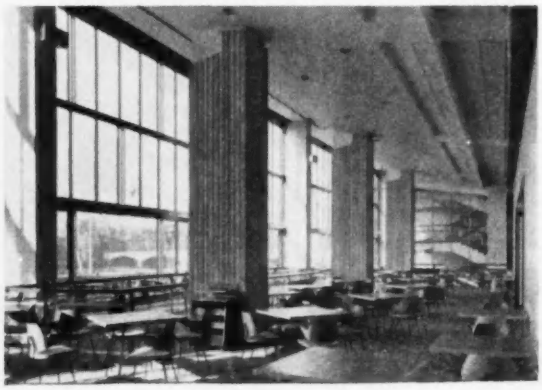
'Contrast-grading' is the modern term for the process of easing the transition from light to dark by shape, colour and lighting; it was coined at the Building Research Station where it was first identified and subjected to laboratory study.

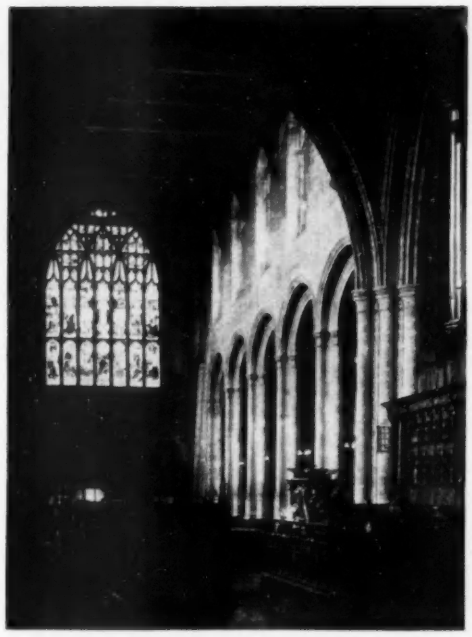
The View-Through

In the preceding article of this series there was a discussion of how to achieve a view-through from the outside of a building to its interior. The same problem exists in reverse indoors; how to achieve the sense of connection to outdoors when this is wanted.

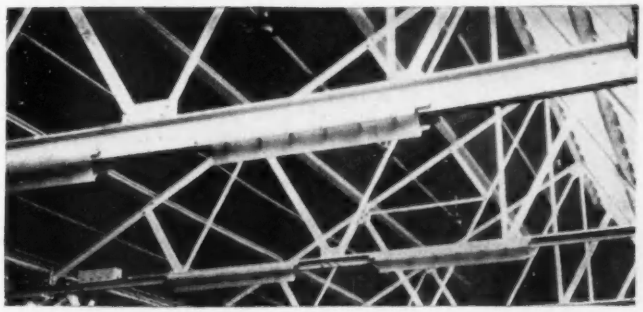
From the outside of a building it is done by reducing contrasts on the glazing frame and by lighting the interior sufficiently; and because the interior would usually be relatively dark, the easiest view-through would be when the glazing

Left: Holes-in-walls in a dynamic, free pattern. Ronchamp: le Corbusier. Right: A window-wall and a bright environment. Freedom from glare through good adaptation of conditions for eyes. Royal Festival Hall: Architect to LCC

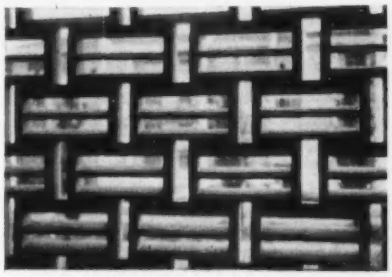




The Great Gothic Window; sensory excitement of a high order by patterns, colours, sparkle



Above: Comfort and the impression of good lighting depend a lot on minimal contrasts across the views of sky. A white painted frame is a great help



Perforated screens often look more delicate from the outside than from within. They can entirely disrupt a view and be very irritating, especially if the pattern is absolutely regular

frame was also dark. The reverse is true from the inside; the glazing frame must be light in colour and shaped to minimise shadow if it is to be minimised as a visual barrier.

Size of pane also comes into it, for the smaller the grid, the greater the sense of barrier presented. One might say of course that with modern glass the panes can be so large that size presents no difficulty. It is sometimes very unsatisfying just to have an invisible 'something' between oneself and the outdoors. Perhaps it is because its very invisibility removes some of the thrill of skill that comes with the use of glass. What one cannot see, one is not aware of. A glazing frame, slender and light, that just makes one aware of it without obtruding is a valuable giver of pleasure and a perspective-maker in design.

This will perhaps seem critical of the use in recent years of heavy, large-paned, rectangular-sectioned frames, carried out in natural wood or black-painted metal. It is the large size of the panes which sidesteps the main risk; but if they were not in fact so dark, many designers might be surprised by how much more comfortable, elegant, and pleasure-giving they would be.

Why should it be the case that a dark grid makes it difficult to register and appreciate a view beyond it? Science can offer no firm explanation yet. It seems perhaps that the contrasting dark lines of the grid draw and hold our attention too firmly and sectionalise the view beyond too definitely to permit us easily to form a connected impression of it; but this is speculation.

Dark window frames cause another unexplained but important reaction, for they give an impression of unsatisfactory daylighting regardless of how good it is as illumination. For this reason the exposure of natural wood frames indoors, and the 'picking out' of frames in dark colours are both practices generally to be eschewed. Like several other types of visual sensation it is often not easy to imagine the nature of the improvement which a lighter colouring of the frames would make, but experience of doing so generally carries conviction.

The Formal Window

All this concerns everyday architecture, but we have not touched upon one of the most formidable and exciting problems in design today, that of the large formal window.

We observed in the previous article that seldom if ever yet in contemporary architecture have we been able to approach the depth and richness of sensory experience achieved in the great windows of the Middle Ages. Anyone who has given a moment's thought to the windows of most modern churches will not dispute this.

Obviously the designers themselves have often been perplexed. They evidently have a feeling that churches call for something special but they don't like obscured glass and find it difficult to use stained glass with conviction. A view of the great outdoors is possible but this has the suggestion of letting nature do one's design. They touch this matter very uncertainly. Most of our framing for glass is rectilinear, and it especially seems to be a doubtful proposition when it has to be used with non-rectangular openings resulting from the highly modelled shapes to which we are often drawn for churches, or when forming the glass walls of shell concrete structures. There is, as yet, scarcely any capacity for visual interest or emotional strength in our contemporary window design. There are some leads in le Corbusier's dynamic pattern of perforations at Ronchamp and in Spence's more regular openings at Coventry. All of these use colour, but all are hole-in-wall techniques. Perhaps the nearest similarity to the nature of the great medieval glass areas is to be found in the complex concrete screens of some of the pre-war modern French churches. Clearly the screening techniques by Stone and Yamasaki are another manifestation of this urge, perhaps to some extent oriental in origin, but thus far they have been used as overall screens, as sunbreaks, as pattern and ornament, as visual barriers; not integrated into window design. Used as they have been, they are frequently irritating from behind, and as yet display little grasp of how to handle them in relation to the sense of sight. In them lies nevertheless one possible growth-point for the modern development of the large formal window.

Techniques for Visual Stimulation

Consider for a moment how far the medieval designer got in the use of techniques for visual stimulation in his great windows. There was first the elegance of the tapered and shaped cross-section of the frame itself; and then the pattern it formed, simple at its base, developing its logic upward into an ordered complexity, often turning what could be glaring views of sky at the top into a screen of small shapes, interesting in themselves, more glittering than glaring, and all related to one another as parts of a single system, growing out of one geometrical idea. If uncoloured but obscured glass was used, it was a texture.

If there was colour, it had not only its own intrinsic interest of picture or pattern, but often a thin edging of silvery brightness which sharpened and heightened the whole play of pattern and colour. There need be no surprise that generations contemplate these windows unceasingly, for their visual interest and emotional strength is perhaps as deep and extensive as anything man has yet created in the world of architecture.

Will we achieve anything comparable? —and what would we mean by comparable?

The Argument Clarified

The argument in these articles should be clear by now. It is essentially that we must not merely satisfy the desire of the human sensory system to avoid discomfort, but must learn how to excite it and stimulate it in the various ways that nature has made possible, for in this lies a large part of the capacity of architecture to give pleasure and arouse feelings and emotional responses of various kinds. The great Gothic glass areas stand not as a type of artefact to achieve in some other manner of design, but they give us a set of values and a measure of possibilities in playing upon the sensory system.

In the age of science it is perhaps somewhat of an anticlimax to have then to say, science cannot yet tell us a great deal about how to excite the sensory system in this manner. However, it has at least stepped up our capacity for analytical observation of sensory experience in architecture, and it perhaps can do little more without our co-operation as architects in recording and speculating upon these important aspects of architecture.

The Architectural Association

Michael Pattrick's Swansong

DESPITE THE APPALLING humid heat which seemed to get progressively worse in the concentrated atmosphere at 34 Bedford-square, there was a full house for the annual prize-giving on July 5. A certain nostalgia hung over the assembled students and staff of the Architectural Association, who were to hear the last speech by Michael Pattrick, their popular Principal, before he begins his new appointment at the Central School of Arts and Crafts.

Speaking about the work of the school, the retiring PRINCIPAL said that architecture had no meaning in theory alone. He himself was not in sympathy with the present mode of three years theoretical study at a university followed by a period of practical training. Referring to his ten years as principal of the AA, he recalled that it could be divided into three distinct phases, the last of which was the period of consolidation. Nobody, he said, liked being consolidated, least of all a student of the Architectural Association; but the criteria of judgment were evident in a consistency of approach and the cardinal points in the development of a student were method and variety of approach to the problems of architecture.

After the announcement of the awards by GEORGE WILTSHIRE, the secretary, the traditional vote of thanks to the president was given by a senior student, P. DE BRANT, vice-chairman of the students' committee. The relationships between the students and the staff, he said, had never been better. de Brant was rather perturbed about the lack of communication between students of various years and with the immediate ex-students who disappeared at the end of the fifth and were not seen or heard of again until they returned as visiting critics, perhaps six or seven years later. In this last respect he was greatly encouraged by the announcement of a post-graduate study group which is to be set up for AA members for the study of special problems. The senior student concluded with an expression of gratitude and sorrow at the retirement of those stalwarts H. J. W. Alexander, Louie Eastman and Gertie Bryant, who between them could boast over a century of service to the Association. He welcomed the new principal, William Allen, and the new director, Edward Carter.

The final word came from the AA president, MR. J. M. AUSTIN-SMITH, who added his own appreciation of Michael Pattrick's contribution to the direction and continued status of the Association. The president mentioned in particular the continuity of direction and its value in the establishment of new policies. As everyone knew, there had been no less than seven principals in the sixteen years prior to Mr. Pattrick's period of office. Since it took five years to establish whether a new educational system was working, such a constant change could be disastrous.

The award of prizes was as follows:

First Year.—Howard Colls Travel Scholarship (£40), A. Lubega. Year prizes (1 guinea each) to Miss J. O. Cochrane, M. N. Glickman, J. H. L. Hill, A. D. Mason, Miss N. Pertuiset and J. Goldenberg.

Second Year.—AA Travel Scholarship (£40), P. S. Leong; Institute of Clayworkers Prize (£21), D. A. Cameron-Clarke. Year prizes (1 guinea each) to J. H. Mosse, D. A. Cameron-Clarke, F. C. Duffy, M. R. Franklin, J. F. Worthington and C. R. Rees.

Third Year.—Holloway Scholarship for study in some form of building practice (£180), A. O. W. Cave; AA Travel Scholarship (£40), M. L. Hopkins. Year prizes (1 guinea each) to J. S. Abbott, M. J. Brett, D. Etherton, B. A. C. Haward, J. C. Morgan, M. L. Pearce, P. M. Rich and G. P. Sainsbury.

Fourth Year.—Roland Wilmot Paul Travel Scholarship (£40), divided between G. J. Bakker, A. Harrison and P. S. Sprent; RIBA Henry Jarvis Prize for Construction (£50), F. C. F. Ng. Year prize (1 guinea each) to M. L. Haxworth, H. E. D. Moon, J. F. K. Scott and D. Yeadon.

Fifth Year.—Henry Florence Travel Scholarship (£50), D. P. Amies; Medal presented annually by le Société des Architectes Diplomas par le Gouvernement, Paris, to the best Diploma student of the session, Miss E. A. O. Evans. Year prizes (1 guinea each) to Miss E. A. O. Evans, Miss I. Aass, A. C. Meats, W. D. B. Rotherham and J. Q. Terry.

Scholarship offered by Imperial Chemical Industries Ltd. (£250), J. B. Corrie. Scholarship awarded by the Building Centre to a student in the fourth or fifth year for research into use of building materials (£100), D. P. Amies.

Chair of Architecture for Bristol

Proposed Incorporation of RWA in New University School

DISCUSSIONS have taken place between representatives of the University of Bristol, the Royal West of England Academy School of Architecture and other interested bodies about the future of architectural education in Bristol. Sir William Holford, PRIBA, has been consulted about the shape that developments in architectural training should take within the university and, with the agreement in principle of the RWA, it is now proposed to take steps towards the establishment of a school of architecture in the university and the incorporation in it of the RWA.

It is proposed that after negotiations with the RWA School have been completed, a chair of architecture should be established and a board of studies appointed to supervise the work of the school. The board would include representatives of the various faculties concerned and of the profession. The school would draw upon all the established departments of knowledge which are related to architecture, including such subjects as sociology, town planning, archaeology and other disciplines appropriate to architectural education in a university.

The school would provide a three-year course leading to a first degree and treating architecture as a broad academic discipline; the course would include provision for alternatives specially related to the different disciplines contributing to the study of architecture. This course would be followed, for those students seeking to enter the profession of architecture, by an appropriate two-year course which, if satisfactorily completed, would make such students acceptable to the appropriate professional body for the purpose of registration. Such a course would include both professional studies and research.

Agreement has been reached on these general principles, but administrative arrangements to implement the decisions have yet to be settled. The Royal West of England Academy will have to obtain the consent of the Charity Commissioners. Considerations will include: (a) the restriction of admission to the school to candidates qualified to take a university course and acceptable to the university; (b) provision for transfer of such present students as are eligible for transfer to a university course and who wish to be so transferred; (c) provision for the completion of qualifications within the school by present students who are not transferred to a university course; and (d) matters relating to staff, premises, students' fees and such like.

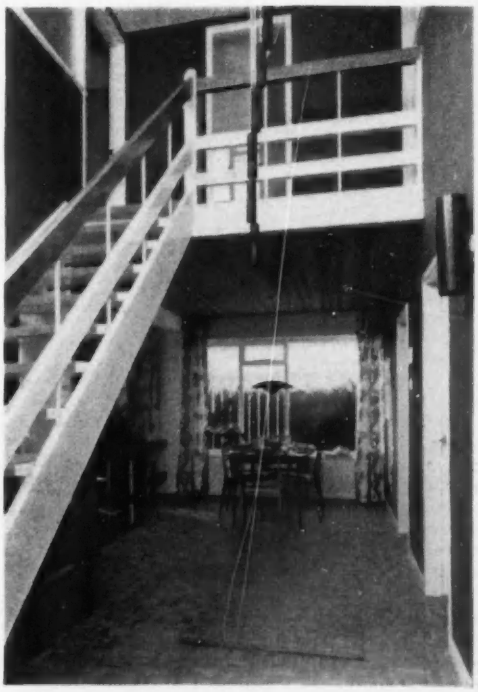
It is hoped these matters will be resolved so that the final agreement may be implemented as soon as reasonably possible after August 1, 1962.

'House of the Shires'

JAMES L. HEAP, ARIBA, chief architect
BASIL G. BROWN, ARIBA, deputy architect
CALVERLEY & SONS (CONTRACTORS) LTD., general contractors

main elevations of the de luxe house

the dining-hall



THE HOUSE, one of 74 on an estate near Oadby Village, Leicester, was recently furnished as a model country house by Home Magazine. The standard version retails at £4,200 and the de luxe at £4,883. Floor area is 1,400 sq. ft. excluding garage, store and porch. The higher-priced house has electric underfloor heating downstairs and Dimplex radiators in first-floor rooms. Flooring is oak parquet and Marleyflex, and the dining area has a cedar strip ceiling. The kitchen has a double sink unit and a refrigerator, and one bedroom has a built-in vanity table. A paved patio is provided at the rear of the house.

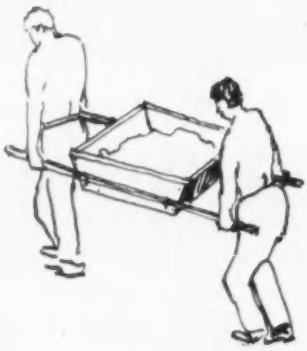
More Everyday Things

BY ARTHUR W. KENYON, CBE, FRIBA

51. As Others Do It (1)

ALTHOUGH ARCHITECTURE is becoming more and more international in design, methods of building still follow local custom and tradition. I was recently asked to erect a screen on a small demolition job to prevent dust from flying across the road. This is an unusual request and calls for an extra on the price, yet in countries abroad, especially in the southern countries of Europe, I see this done everywhere with lengths of reed matting. No doubt it also forms a protection from the weather. But here we seem content to put up with clouds of dust during both demolition and erection. It is time we started to think about dustless zones as well as smokeless ones.

During a short stay on the Adriatic coast of Jugoslavia I watched from my bedroom window work on the reconstruction of a hotel. Work started at 6.00 a.m., as it does in hot countries. I watched fascinated, thinking myself back in the pre-machine age, for the lorry which carried the building materials on to the site was the only indication I could see that the machine had penetrated into the building techniques of this medieval town. Even the wheelbarrow seemed to be unknown, for mortar was carried in a mixing box with a double pair of handles lifted by two men. No doubt the box also acted as a gauge.



A new roadway was being made and the stones were put in carefully by hand. No pockets were left; no pegs were put in, yet the finished effect appeared to be quite level and ready to take the top dressing. There did not seem to be a foreman and there were no huts about the place. Each man seemed to have his own job to do, and to the casual observer they all seemed to work in with each other without any organisation from above. There were no ladders, the long ramps which one sees so often in other countries being used instead. I have never been able to discover why they are preferred: perhaps a walk is easier than a climb.

I broke the unwritten law by going over another man's building uninvited, but as I nosed my way in nobody took any notice of me. Perhaps they took me for just another workman. Everything seemed very tidy with work going on in a very orderly way and the different trades all seemed to be there at the same time, yet no one seemed to be in anyone else's way. I was interested to see how good the plastering was. They did not use the metal float (the worst plastering tool ever invented) and the plaster came from the wooden float clear and crisp with angles sharp and true. The woodwork was obviously handmade, as I had seen it done in many of the woodwork shops about the district.

Most of all I enjoyed looking at the job each evening when the men had finished. The outside of the building was left clean and tidy. It seemed to be everyone's job to clean up before going home. But these were a clean and tidy people everywhere—in their homes and in their streets—and it seemed as though they could not do otherwise in their work. Some English workers I have known, please note!

Piccadilly Circus Redevelopment

Sir William Holford's Latest Recommendations

THE LONDON COUNTY COUNCIL'S roads and town planning committees have, as stated in our last issue, considered a further interim report by Sir William Holford, PRIBA, on the future development of Piccadilly Circus, in which he records the progress of his discussions with the various statutory authorities and the Royal Fine Art Commission.

This report, say the committees in their report submitted to the Council on Tuesday (July 18), indicates that, so far as the general layout of the scheme is concerned, some adjustment and amendment to the original proposals is likely in the final scheme. Sir William, however, it is stated, is in close touch with the architects acting for the developers and owners and is optimistic that he could submit in the autumn a final layout for consideration by the Council to form a framework within which developers could operate and which would not depart from the main principles of his original conception.

Problems of Reconciliation

His report indicates that there are still problems in reconciling the traditional role of the circus as a public centre of resort and entertainment—the hub of the Commonwealth as it has been romantically described—with its character as a complex traffic intersection. The formation of an underpass or flyover is not practicable here. It was therefore necessary to devise a surface level solution with the maximum possible channelling of vehicles and, as indicated above, Sir William proposed what is in effect a large rectangular roundabout. His scheme, with some minor adjustment, could give the intersection a small increase in traffic capacity.

Sir William feels very strongly that any alternative giving greater increase in traffic capacity would be damaging to the scheme as he has hitherto conceived it, particularly as it must alter the character of the piazza shown in the provisional design. He argues that traffic considerations should not prejudice amenities and design in the redevelopment of Piccadilly Circus. He points out that if traffic improvement is to be the cardinal consideration the measures that would need to be taken would be (to quote his words) 'hostile to most ideas about the preservation and growth of Piccadilly Circus itself.' He considers that if the matter were carried to its logical conclusion 'pedestrians should be discouraged from coming into the circus at ground level and any new facilities or attractions at that level should be kept outside it—particularly in Regent-street and Piccadilly, which have traditional shopping pavements. In short, the only way in which Piccadilly Circus would then need to be made visually attractive would be from a distance or as seen from a vehicle; and as the object of this traffic exercise would be to increase speed and numbers and safety, the amount of satisfaction to be gained might not be worth the cost and trouble of redeveloping the circus at all.'

The proposals in Sir William's provisional scheme would ease traffic conditions improvement by the separation of pedestrians from vehicles on three sides of the circus, the provision of escalators to encourage the use of the subway and first-floor level pedestrian circulation systems, the provision of proper loading and unloading facilities in the new buildings, the closing of Glasshouse-street as an entry to the circus and the removal of the tip of the Monico site which at present projects into the circus. Road realignments on the eastern side of the new island will also help.

The committee's report adds: 'We have discussed the problem with Sir William. It has not been possible in the time and with the limited information available to work out the financial implications of Sir William Holford's scheme, nor has it been possible to ascertain what contribution could be expected from the Minister of Transport and the Minister of Housing and Local Government. The stage has now been reached when the whole problem of the traffic and civic design aspects of the layout should be discussed urgently with the two Ministries jointly before any final decisions can be taken.'

St. Martin-in-the-Fields

THE LONDON COUNTY COUNCIL'S town planning committee have decided to contribute £1,000 towards the cost of restoring the ornamental ceiling of the church of St. Martin-in-the-Fields. When completed the work is expected to cost between £17,000 and £19,000.

News of the Week

International Design Congress

DESIGN POLICY FOR CORPORATE BUYING will be the theme of an international design congress sponsored by the Council of Industrial Design at the Royal Society of Arts on October 4 and 5. The programme will illustrate that design policy in corporate buying is a keystone in building successful industrial, commercial, government or educational organisations and results in increased efficiency, better working conditions and improved sales and service. Attendance to the congress will be by invitation and will be limited to 200 delegates. The opening address will be given by Lord John Hope, the Minister of Works and speakers will include Professor Misha Black, OBE, Mr. D. E. E. Gibson, CBE, FRIBA, Professor Sir William Holford, PRIBA, Mr. W. D. Lacey, ARIBA, Professor Llewelyn Davies, FRIBA, Mr. Gio Ponti, the Italian architect, and Sir Gordon Russell, CBE. The congress secretary is Mr. James Cousins, ARIBA, purchasing liaison officer of the CoID.

Wimbledon Redevelopment Scheme

WIMBLEDON COUNCIL has approved a comprehensive redevelopment scheme for a central area of the town which is to be submitted to Surrey County Council, the local planning authority, for approval. The scheme, which affects an area bounded by Hill-road, Worple-road, Altgrove and the railway, provides for the improvement and widening of streets, the demolition and rebuilding if many out-of-date premises and the provision of multi-storey parking for 1,000 cars.

Redevelopment at Sutton Coldfield

SUTTON COLDFIELD has engaged the firm of Max Lock and Partners to prepare a report, with plans and model, for a proposed redevelopment scheme for the town centre.

A New London Museum

THE LONDON COUNTY COUNCIL has received a report from the general purposes committee on discussions with the bodies concerned as to the possibility of the Council, the Government and the Corporation of the City of London joining together to establish a local museum for London by combining the London Museum and the Guildhall Museum.

The capital cost of providing an adequate building for a combined museum, which might be within the City of London, would be about £1½m. and annual running costs would amount to about £125,000. The committee envisage that participation by the Government, the Council and the City Corporation might be on the basis of equal partnership in sharing costs and in representation on the Governing body. They hope to be in a position to report comprehensively on a scheme acceptable to the other bodies concerned after the summer recess and to recommend the Council to take part on these lines.

Engineers to Drop Merger Talks

THE Institution of Municipal Engineers, which has about 6,000 members in the British Isles, is to discontinue negotiations for a merger with the Institution of Civil Engineers, which had already voted in favour of amalgamation.

The latest poll of the municipal engineers, voting by personal attendance at 28 centres in Britain and Ireland, showed 1,342 votes in favour of amalgamation and 1,020 against. Just under 40 per cent of the members voted. The vote in favour was 56.8 per cent, but a special general meeting held earlier at Brighton had decided that two-thirds of those voting must be in favour if the project were to go ahead. An earlier postal vote, including overseas members, had shown 62 per cent in favour, with 84 per cent of the world membership voting.

A Correction

THE PRESIDENTIAL ADDRESS referred to under 'Engineering Institutes' in 'The Builder' of June 30 was that given at the annual conference of the Institution of Municipal Engineers at Brighton on June 14. The proposed amalgamation referred to in the address as published should therefore read as that between the Institutions of Municipal and Civil Engineers.

AA List of Members

THE ARCHITECTURAL ASSOCIATION list of members, corrected to May, 1961, is now available from 34 Bedford-square, London, WC1.

Italian Bronzes at the V & A

AN EXHIBITION of Italian bronze statuettes will open at the Victoria and Albert Museum on July 27, and will remain open until October 1. The exhibition has been organised jointly with the Italian Ministry of Public Instruction, the Rijksmuseum, Amsterdam, and the Arts Council, and includes major loans from Italian public and private collections, from Dutch Museums, the Kunsthistorisches Museums, Vienna, the Ashmolean Museum, Oxford, and the Louvre. Many of the most famous small bronzes in the world will for the first time be shown together.

Singapore Improvement Trust

THE REPORT of the Singapore Improvement Trust for 1959, now issued, contains a note on the future of the Trust now that it has been replaced, as a result of legislative action, with a Housing Development Board. The object of the new Board is to concentrate on the erection of public housing and, in conjunction with a Planning Authority, to provide for the planning and improvement of Singapore.

The production of houses by the new Board, it is stated, could not be as great in its first year as the Trust achieved in 1958 because the restriction in the letting of new contracts in 1959 would result in 1960 completions being low. At the end of 1959 a total of 1,152 units were under construction. It was expected, however, that the new Board would ensure that building operations in 1960 were appreciably increased and that a continued and increasing programme of public housing development was carried on in subsequent years.

The report contains an interesting account of the work of the Trust together with a number of illustrations of housing and other schemes for which it was responsible. It is issued by the Housing and Development Board, Princess House, Queenstown, Alexandra-rd., Singapore 3.

ACOUSTIC CANOPY, BATH ABBEY.—*To prevent the sound of the music being unduly dispersed in the lofty ceiling of Bath Abbey, this acoustic canopy, constructed of Douglas fir plywood, was erected for the recent 1961 Bath Festival. Painted in deep red and blue, the canopy measures about 20 ft. sq. and is supported on two columns, also of Douglas fir. The plywood columns obviate the need for fastenings in the masonry. Besides its lightness, the material was chosen because of the resonant quality of fir plywood, plus its ease of fabrication and erection. The acoustical consultant was Hugh Creighton, ARIBA, in collaboration with the TDA. The canopy was built by J. Long & Sons (Bath) Ltd.*

Architects' Fees for Housing

THE ASSOCIATION OF MUNICIPAL CORPORATIONS, at their meeting on July 20, recieved a report of the housing committee on the withdrawal by the RIBA, as from May 31 last, of the special scale of charges for state-aided housing schemes and its replacement by the normal RIBA scale of professional charges, subject to special rates for repetitive work.

States the report: 'We regret this decision, which will undoubtedly increase fees payable to private architects for local authorities' housing work, but having regard to the failure of negotiations in 1959 we do not believe that there is any acceptable alternative.'

Bradford Architect's Department

BRADFORD CITY ARCHITECT'S DEPARTMENT plans to double its present strength. If the establishment committee and the city council agree to the plan of the city architect's committee it will enable almost all Corporation schemes to be prepared without going to consultants.

Appointments

MR. ARTHUR MICHAEL GREEN, deputy engineer, surveyor and water engineer at Peterborough, has been appointed city engineer at Lancaster, while Mr. Ernest Allan Heppenstall, ARIBA, has been appointed city architect there. These appointments follow the appointment of Mr. L. Lyons, former city engineer at Lancaster, as engineer to the new Lune Valley Water Board, the city council having decided to divide the duties.

THE CHIEF ARCHITECT of Salisbury, Wilts, Mr. Frank Brock, ARIBA, has been appointed Hereford city architect in succession to Mr. N. Roberts, who has resigned. He is 40.

MR. DAVID SIDNEY DAVIES, ARIBA, senior assistant architect to Derbyshire County Council, has been promoted deputy county architect. He succeeds Mr. Edward H. Ashburner, FRIBA, who retires in October.

MR. J. BLACKBURN, ARIBA, burgh architect at Inverness, has been appointed borough architect at Worthing.

MR. JOHN WILKINSON, Dip Arch (Manchester), ARIBA, assistant architect to Lancashire county council, has been appointed architect in the Warwick borough surveyor's department.

Change of Address

THE Divisional Architects' Department of the East Midlands Division of the National Coal Board (H. S. Barnett, LRIBA, Divisional Architect) has moved from 69 Lower Parliament-street, Nottingham, to Sherwood Lodge, Arnold, nr. Nottingham. Trade literature, catalogues and samples would be appreciated.

Coming Event

MONDAY, JULY 24

WESTMINSTER CITY COUNCIL.—Announcement by Mayor of assessor's award in Lillington-street housing competition. Caxton Hall, SW1. 12 noon. (Designs on view until July 29.)

A Hundred Years Ago

From The Builder of July 20, 1861

MUSIC IN 1862.—A proposition is being circulated by several gentlemen connected with music, for building an International Concert-room at Kensington, for the display of music during the forthcoming Exhibition of 1862. An application to that end, we are informed, has been made to Her Majesty's Commissioners for the vacant site at the back of the conservatory of the Royal Horticultural Society's gardens; and plans of the proposed International Concert-room have also been submitted; but that part of the undertaking remains in abeyance until the movement is more thoroughly matured.

LCC Salaries

Increases for Senior Officers

AT THE MEETING of the London County Council on Tuesday the general purposes committee recommended increases of salaries of 10 to 12 per cent for heads of departments and their deputies and of 12½ per cent for other senior officers. Following are examples of the new scales (b=biennial increments):

Position	*Present Salary*	*Revised Scale*
General Purposes Committee		
Architect	£5,750	£6,350
Deputy chief engineer Deputy architect	£3,575—£4,075 (*b*)	£3,985—£250—£4,485 (*b*)
Director of housing	£4,400	£4,900
Deputy director of housing	£2,775—£3,075	£3,125—£100—£3,425
Admin. officer, architect's dept.	£2,700—£3,000	£3,040—£115—£3,155—£110—£3,375
Principal housing architect Schools architect Planning officer, architect's dept.	£2,700—£2,900	£3,040—£115—£3,155—£110—£3,265
Dep. planning officer, architect's dept. Town dev. officer, architect's dept. Senior architects Principal q.s., architect's dept.	£2,400—£2,700	£2,700—£115—£2,930—£110—£3,040
Assistant directors of housing	£2,400—£2,700	£2,700—£115—£2,930—£110—£3,040
Establishment Committee		
Assistant housing architect Assistant schools architect (design)	£2,400—£100—£2,700	£2,700—£115—£2,930—£110—£3,040
Assistant architect (gen. div.) Assistant architect (special works div.) Assistant architect (town dev. div.) Assistant sen. arch. (building regulation) Assistant senior architect (theatres) Group planning officers, architect's dept.	£1,925—£75—£2,225	£2,170—£85—£2,425—£80—£2,505

IUA Conclusions

Report on Sixth Congress

LAST WEEK, Mr. J. M. Richards, CBE, ARIBA, gave a report on the conclusions reached by the sixth Congress of the IUA, at a meeting in the headquarters building. Sir William Holford, PRIBA, took the chair during the report and discussion.

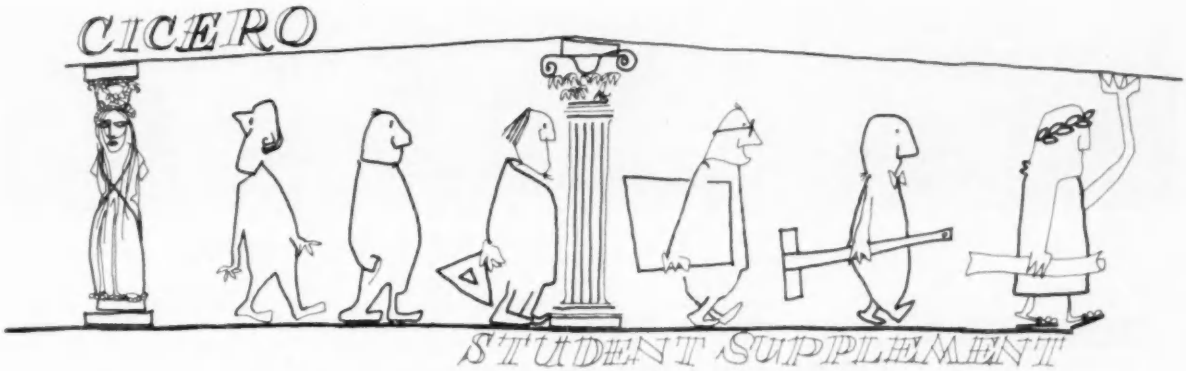
MR. RICHARDS summarised the Congress discussions under six aspects: (1) the problem of the architect using ready-made standard componets and the danger of his becoming an expert in packaging, which would not bring good architecture; (2) determining the size of a component, achieving standardisation of form and dimension, could not be arbitrarily imposed; the solution was linked with the whole complex of industrial and economic processes; (3) the contradiction existing in the use of a material lending itself to industrial quantity production but which requires craft labour to achieve the desirable standard of finish, as evidenced by reinforced concrete work and the subsequent application of sand-blasting or tooled finishes; (4) should architecture be the incidental result of new technique and materials, or can science create these materials as needed by the architect's specification?; (5) the architect must accept the role of industrial designer in order to have control over the components which go to make up a building, otherwise he will be reduced to the status of an assembler; (6) the marriage of architecture to industrial production requires full co-operation between architect, manufacturer and contractor.

Points from Discussion

Points from the discussion: Architect: who is to start the process of standardising? Engineer: prefabrication and components are already with us. MR. MARK HARTLAND THOMAS: most parts of a building are specials; standardisation is not here yet, until the 4 in. module arrives. Architect: components have to be produced continuously without variations; in this context the architect doesn't exist. Contractor: don't industrialise the architect or he will lose his fineness of mind. Architect: 'industrialised-architects' are required, designing components in industry but retaining their ARIBA. MR. J. F. CRITTALL, managing director The Crittall Manufacturing Co. Ltd.: architect-collaboration should begin at the early stage with the manufacturer. Manufacturer: the ignorance of the client is the stumbling block; we have to educate the user towards the social consciousness existing in Switzerland. Plastics manfacturer: in the motor industry, capital, design and manufacture are one integral organisation, and technical advances are directly profitable; in building there is separation of design and construction so that financial benefits are nil during the development of new techniques.

New Sales Offices

THE LONDON SALES OFFICES of the Evode Group of Companies have moved to bigger premises at 450-452 Edgware-rd., W2. In addition, the storage facilities at Greenford have been enlarged.



Schools of Architecture: 3

University of Manchester School of Architecture

THE UNIVERSITY OF MANCHESTER SCHOOL OF ARCHITECTURE was established in 1903 with the foundation of a chair in architecture, held initially by Professor Capper. Professor Dickie followed in 1912 and in 1933 the present director, Professor R. A. Cordingley, himself a graduate of the school, took over. Exemption from the intermediate examination of the RIBA was granted in 1904, and in 1922 both the degree and diploma were recognised as exempting candidates from the final examination of the Institute.

As in the case of most university schools of architecture, the number of students at Manchester has increased considerably since pre-war days. In 1933 there were 55 full-time students. The number at present is in the region of 178 which is the maximum that can be accommodated in the present building—while only about 30 per cent of the applicants for admission can normally be accepted.

In its less expansive days the school occupied premises known affectionately to earlier generations as '244,' but with the increase in numbers following 1946, colonies were established in adjoining buildings, while from 1947 to 1953 the second and fourth years enjoyed (and took full advantage of) unprecedented freedom of action in a Victorian mansion some four miles from the centre of the university. At '244,' after many skirmishes, the architects had come to live on relatively peaceful terms with the dentists who occupied the lower floors of the building and, perhaps partly for this reason, in 1952 the whole school was decanted into a newly erected wing of the Turner Dental Hospital. It appears likely that the architects will remain the guests of the dentists until new and, it is hoped, permanent accommodation becomes available in the humanities block which is at present in the planning stage.

Extra-Curricular Activity

In 1952 the School of Town and Country Planning became independent under its own professorial jurisdiction, with the appointment of the late Professor Clifford Holliday to the newly-established chair and the organisation of a five-year full-time course leading to an arts degree in the subject. Since that date, however, the two schools have worked in close collaboration, and many architectural students go on to take qualifications in planning after completing their first degree. This is not the only extra-curricular activity stimulated by the school. The pre-war North British Architectural Students Association, the York Institute of Advanced Architectural Studies and the Society of Architectural Historians have all derived considerable inspiration and support from Manchester. It is interesting to note, too, that six present heads of schools of architecture were trained at Manchester; five of whom occupy university chairs.

The Present Course

The present course follows what might be regarded as the normal pattern, with major examinations at third and fifth years, corresponding approximately to the RIBA intermediate and final. Students completing the course are awarded a BA with honours in architecture, or a diploma in architecture, those following the degree course offering a higher entrance qualification and taking history of art as an additional subject. To ensure that each tutor has a reasonably small number of students to deal with in the studio, each year is divided into two or three groups. The tutors for each of these are given considerable freedom in developing methods of teaching, so that some programmes are issued to only ten students, while others are completed by the whole year of 30.

The first or preliminary year forms, in a sense, a foundation course which introduces students to the study of form, elementary structures and the study of history and theory of architecture. At the same time this preliminary period, to a certain extent, irons out discrepancies in previous education. At the end of the year those who appear to have little real aptitude for architecture are sifted out and the remainder pass on to the second year where a more precise study commences. Lectures are given in most cases by the department's own staff, but courses in building science and structures are provided by the Manchester College of Science and Technology. Contact with the profession is maintained by visiting lecturers and local practitioners who deal with subjects more closely related to practice.

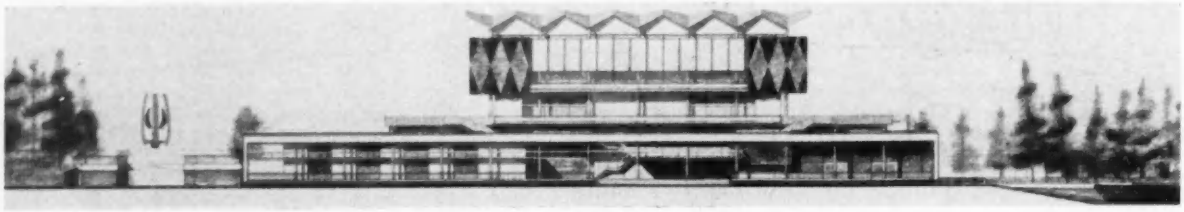
From the time of the school's foundation the aim has been to produce graduates who possess a sound background education in the humanities. To this end there has always been a close relationship with the Arts Faculty of the University. This policy is reflected in the school's traditional reputation for postgraduate work and altogether some 30 higher degrees have been awarded to graduates for studies in fields ranging from precast concrete construction to Greek and Roman colonial architecture. The first award in this country of a PhD in an architectural subject was made at Manchester.

Until recently the organisation of the course was closely related to the existing examination structure within the Arts Faculty and, as a result of changes which had taken place in the number and type of subjects taken, the relationship between these subjects and their importance for degree examinations had become somewhat arbitrary. During the last two years, the regulations have been rewritten, omitting the foreign language requirement in the first year and including in the degree examination all subjects taken in the course. No radical change in the later years of the course is at present contemplated, although a two-stream system in the fourth and fifth years has been considered as a more acceptable alternative to the three-year degree followed by two years specialised training now coming into operation in some other schools.

Rationalisation of Design Process

It is, however, in connection with the exercises in design that the most promising developments are now taking place at Manchester. It has been obvious for some considerable time that for the purpose of instruction in this subject, as well as for general utility, a rationalisation of the design process is essential, and during the past three years a method of staged design procedure has been developed and applied in the lower years with the intention of extending the

(Continued on page 120)

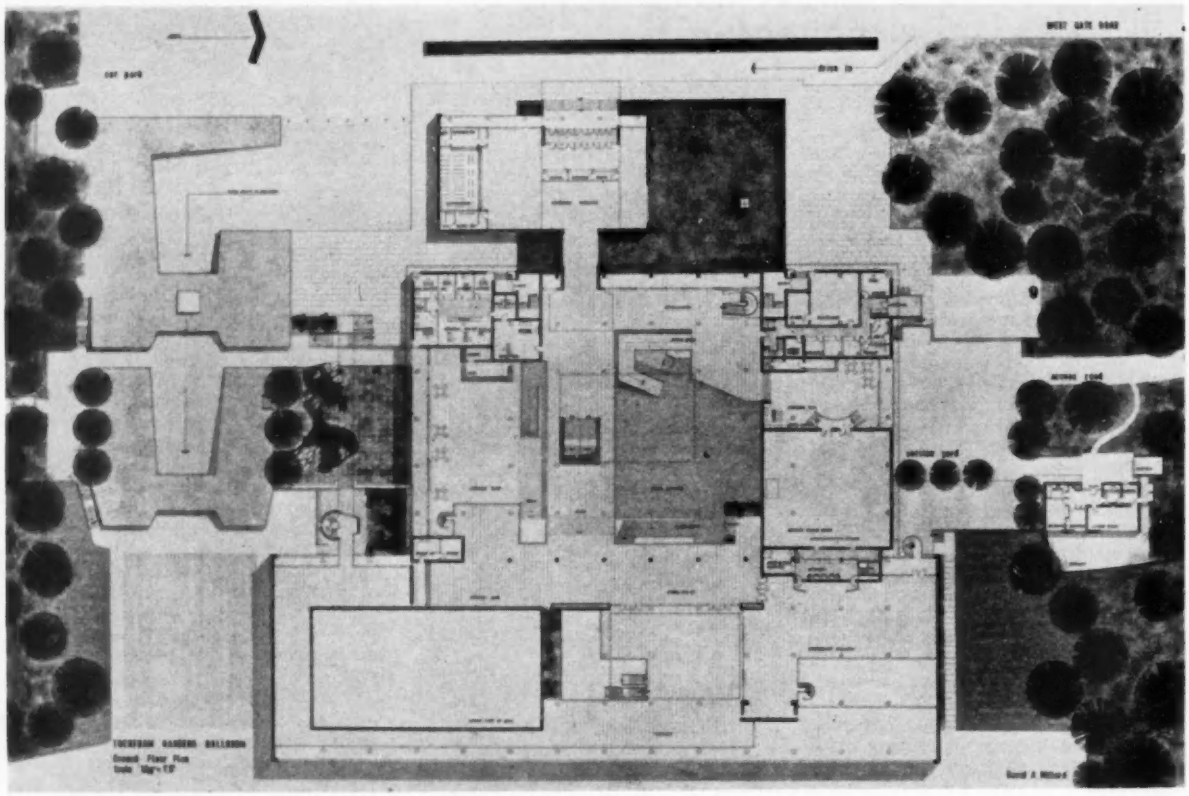


east elevation

Thesis Design

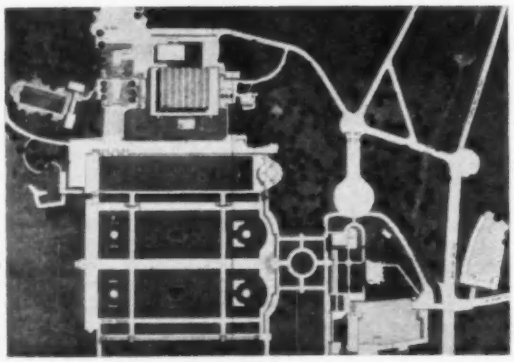
Trentham Gardens Development

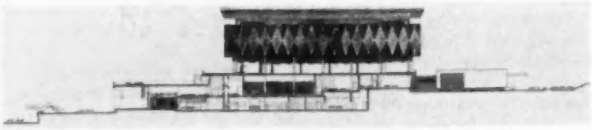
DAVID A. MILLARD, *Fifth Year, Manchester University School of Architecture*



ground floor plan

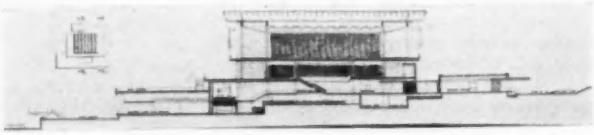
landscape treatment and site plan—the northern boundary is the right hand site of the site as shown

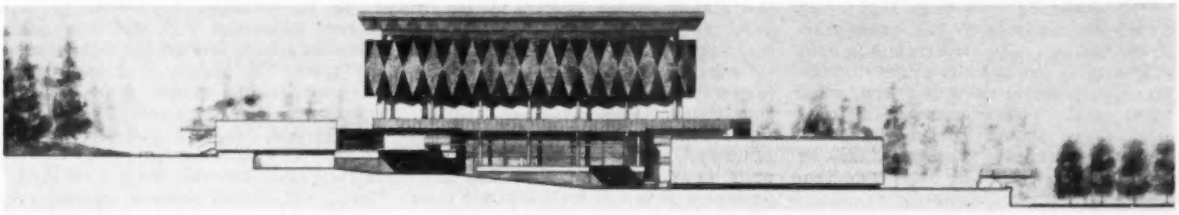




sectional elevation c-c from north

section b-b east to west





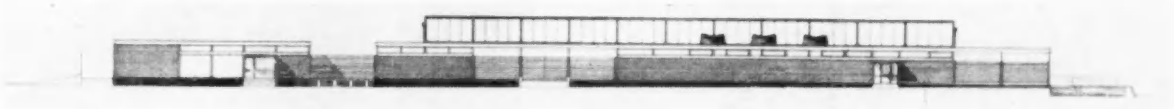
south elevation

THE NEW BALLROOM block is the central feature of the whole complex. Paradoxically, its external expression had to be bold and formal enough to be 'significant' within the rigid landscape treatment, but at the same time required an internal character appropriate to the relaxed activities taking place within. In solving the problem of the integration between the existing gardens and the new extension of them, a means of achieving the required character within the ballroom block became apparent. The existing gardens were extended in an ascending series of broad terraces, creating a physical break between old and new, but allowing a continuity of visual experience. The spatial and formal implications of this device were continued into the building and developed into pierced superimposed horizontal planes permitting spatial interpenetration throughout, thus uniting the internal organisation with the landscape.

Design Programme

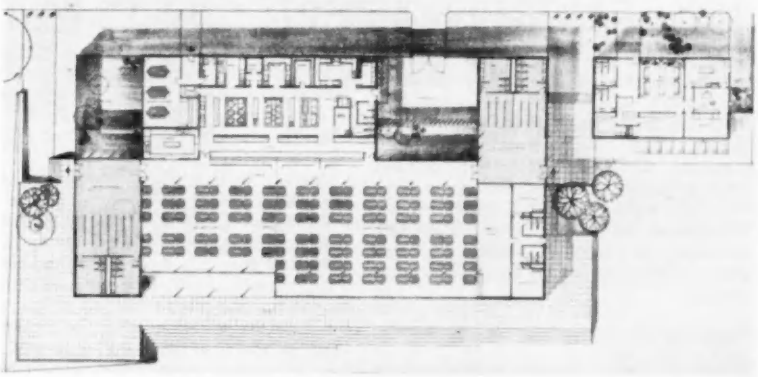
A Canteen and Welfare Block

NORMAN R. FOSTER, *Fourth Year, Manchester University School of Architecture*

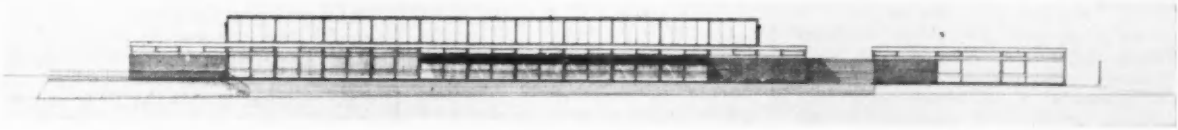


north elevation

plan-terrace and steps facing south



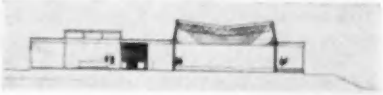
ACCOMMODATION WAS SPECIFIED for a canteen and welfare block for a light engineering company to be sited on an industrial estate between the company's works and playing fields. Apart from the planning and circulation problems involved in relating the two self-service canteens and a senior staff dining-room to a main kitchen, this scheme developed into an exercise in the design of single-storey framed structures, while the integration of the structure into simple and direct spaces within an accepted discipline of a rectangular plan dominated the design process throughout. Interest was achieved within this simple form by the shapes of projecting roofs and modelling of the façades, blinds, terraces and screens: the latter being also used to relate the separate welfare block to the main building.



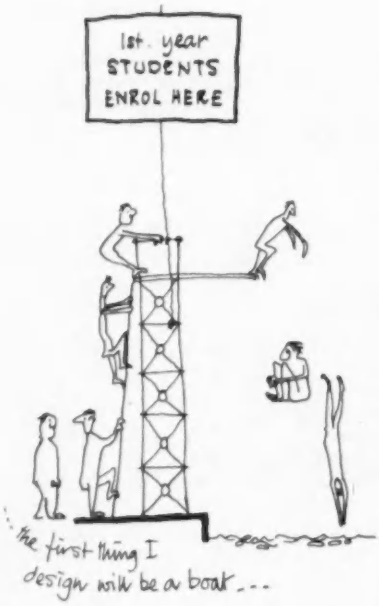
south elevation

The main view overlooks the playing fields to the south, but the interior is enlivened by carefully-controlled views into the internal garden courts. These courts conceal the view of factory buildings from within and the inevitable untidiness of service areas from without. The main objective was to provide a logical and reasonably economical answer to a realistic programme and to give relief from the industrial landscape.

cross section



(*continued from page* 117)
system progressively to the upper years of the course. This departure has been welcomed by the majority of the students who appreciate the value of at least some order in the present confused state of architectural thought and who, in any case, appear actively to resent a 'sink or swim' philosophy where their own professional future is concerned.



This 'method' provides a discipline within the field of architectural design without taking refuge in the fields of science, building technology or research. From experience so far it seems likely to form a major contribution to architectural theory and architectural education generally, while the fact that it does not relate to any one architectural idiom gives it special significance in a school which, throughout its history, has deliberately avoided teaching a particular architecture or following temporary fashions too closely.

Themes Ancient and Modern

TRANSPORT takes a prominent place among the subjects chosen for final year theses at the Hammersmith School of Architecture this year. One such is a design for a cross-channel hovercraft terminal building at Dover—topical enough and completely original. The site, selected in consultation with the Dover Harbour Board, adjoins an existing car ferry terminal. The layout is designed to accommodate a 1,000-ton hovercraft carrying up to 1,500 passengers in 300 cars at a speed of 80 knots. A factor which has governed the whole design, produced with advice from hovercraft designers, was that to provide an economically feasible service a turn-about speed of 25 minutes had to be achieved. This courageously tackled project also includes a 20-storey luxury hotel.

Another student chose to design a new air terminal at Cromwell Curve on the new Cromwell-road extension. He proposes an extensive pedestrian podium covering approximately ¼ mile between the existing terminal and Gloucester-road tube station and incorporating multi-level circulation.

A written thesis by another student is concerned with improving access to airports in the London area and makes numerous proposals for a separate monorail system linking London Heathrow to town terminals, heliports on the river and continuing to Gatwick Airport. At least one student is undeterred by the prospect of nuclear warfare. Research has shown him that nuclear resistant buildings can be designed and his proposals are for a ring of hospitals or similar public buildings to form medical and administrative control and distribution centres in the event of nuclear attack.

Projects by overseas students include a bazaar and office complex at Delhi, a Buddhist temple in Malaya, a market centre in Cyprus and a civic centre at Baghdad.

Laurels for the RWA

A STIMULATING ADDRESS by Edward Carter, the newly-appointed director of the Architectural Association, and the announcement that the school is to be incorporated in a school of architecture which is proposed to be established in the University of Bristol, made the prize-giving day at the Royal West of England Academy School of Architecture on July 13 an occasion of extreme importance in the field of architectural education. The text of the statement about university status for the school, made by Kenneth Nealon, chairman of the school council, is given in full elsewhere in this issue and it is sufficient here to record that the University of Bristol with the agreement in principle of the RWA proposes to take steps towards the establishment of a chair of architecture.

After a brief report from the school's principal, EVELYN FREETH, who reminded his audience that the School of Architecture had been in existence for only forty years and was in a state of excitement at the prospects ahead, EDWARD CARTER presented an impressive list of prizes and diplomas before addressing the students. With so many parents and others of his own generation present the speaker took the opportunity to pep-talk the latter on their responsibilities in the fields of awareness and visual appreciation.

BASA Conference

'THE BASIS FOR DESIGN' *will be the theme of the fourth BASA conference on architectural education which is to be held at the York Institute of Advanced Architectural Studies from September 1 to 3. The cost, inclusive of meals, accommodation and booking fee, is 3 guineas for members, 3½ guineas for associates, and 4 guineas for non-members. Booking forms may be obtained from the Secretary, BASA, the Building Centre, Store-street, London, WC1*

To the students themselves he was mainly concerned with the relationship between science and art and more specifically with the impact of technology on architecture, the theme of the recently concluded IUA Congress. The vote of thanks was proposed and seconded by T. H. B. BURROUGH, president of the Bristol and Somerset Society of Architects, and ADRIAN SANSOM, president of the RWA School of Architecture Students' Club, respectively. The latter remarked on the success of the lively extra-curricular activities, especially those provided by the students' club. He regretfully reported that the club's Rolls-Royce has, in the interests of democracy, been disposed of. One new feature of the club's rôle in the school is an annual prize for the student showing the most initiative in all aspects of student life. The first award was presented, as the principal announced, unhesitatingly to C. Rolfe, the BASA representative.

Another Lost Cause?

FOUR STUDENTS of the Oxford School of Architecture, disciples of a 'progressive movement' in architecture, started by a former student, Biltin Toker, from Turkey, have been informed that they must leave the school because their work is 'incomplete and in some cases not satisfactory.'

News from Hull

AT THE ANNUAL GENERAL MEETING of the Hull Guild of Building on May 15 Mr. K. H. Allmark was elected to represent the Hull Regional College of Art and R. E. Beard and M. G. E. Johnston student members of the Council. Recent awards made by the Guild to students of the Hull School of Architecture for working drawings made during the 1959-60 session were: B. Jindle, second-year; M. Kirkwood, third-year; and R. Sanguin, fourth-year.

Polytechnic Diploma Address

'REMEMBER, BOYS, to make all your mistakes in the provinces.' This delightful short lesson in lifemanship was given to the students of the Regent-street Polytechnic School of Architecture, Surveying and Town Planning by RALPH ERSKINE as the preface to his address to them during the diploma ceremony on July 13. Mr. Erskine complimented the students on the virtuosity that was evident in their work, but raised doubts on the importance of designing beautiful buildings. He felt that this was justifiable only in exceptional cases; the real problem and task of the architect was to create the right physical relationship between the elements which make up environment.

Publications

COPIES of 'Accent,' the magazine of the Leeds College of Art, and 'Outlet,' published by students of the Bartlett School of Architecture, University College, London, may be obtained from Tirantis, Charlotte-street, London, W1, or from the respective schools.

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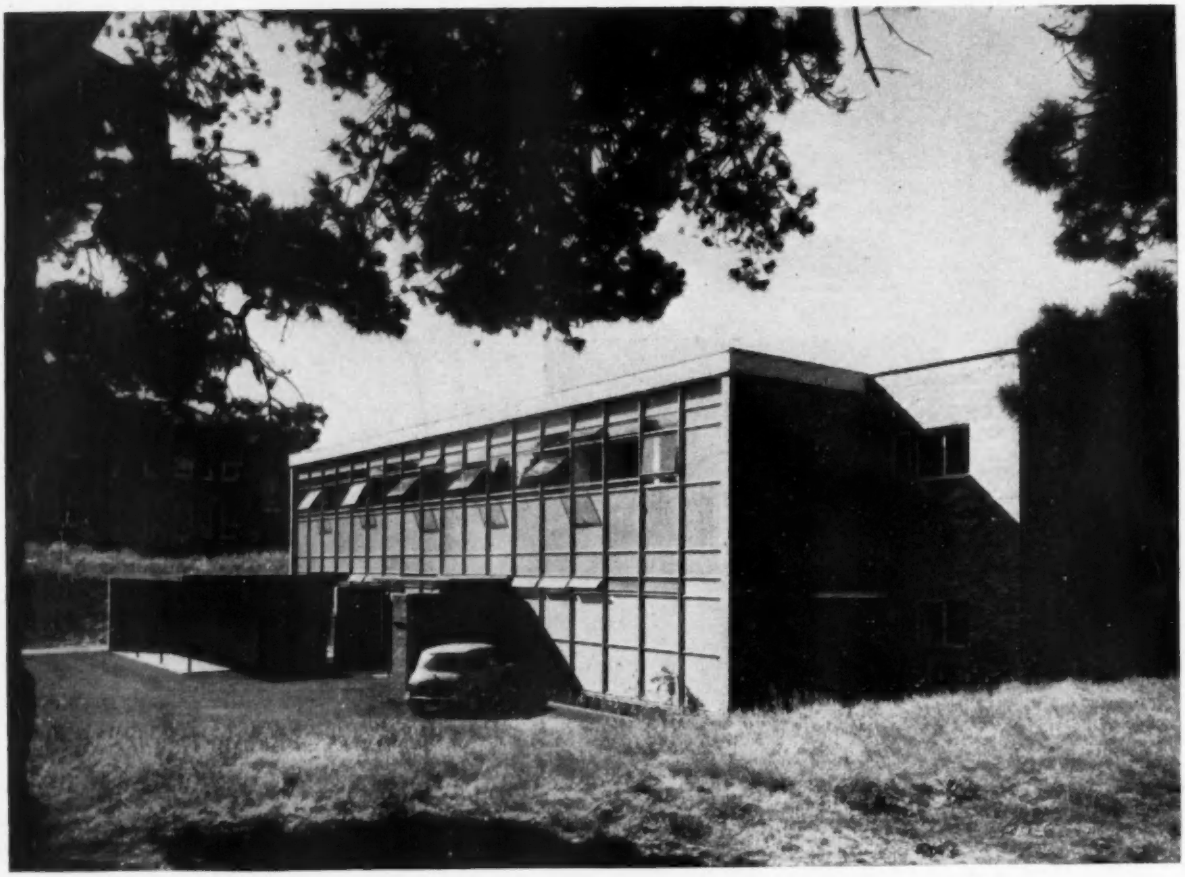

Architect to the Board:
Richard Mellor, F.R.I.B.A.

Architects:
Messrs. Gutteridge and Gutteridge

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IUA Students' Exhibition

FROM OUR SPECIAL REPRESENTATIVE

THE MOST STRIKING thing about the students' exhibition on the South Bank, apart from the thunderous effect of the wind whipping across the polythene roof, was that the contributions from overseas sadly eclipsed the work of United Kingdom schools both in design and presentation. With two exceptions, the English schools have produced a selection of mediocre designs which lack originality, skill in drawing and adequate detailing. Among the English schools, too, there are several notable absentees. A host may not wish to make his guests completely inconspicuous but he should at least be equal to his station.

The exhibition comprises the results of competitions held at each school for a movable theatre. The nature of such a project, of course, involves complete prefabrication of an easily erected lightweight structure. The majority of the students produced tent-like structures of varying shape, size and degree of adaptability. Many have based their designs on national custom and tradition and all have necessarily been influenced by possible forms of transportation and climatic conditions.

Outstanding Japanese Exhibit

A Japanese design, by L. KENMOCHI of the University of Tokyo, is expressly intended to be similar in shape and function to the ancient Japanese shrines from whence emanated the traditional theatre in that country. It is a triangular structure in lightweight aluminium ribs and panels—a unit design capable of extension to meet local requirements. By virtue of its approach this design seems calculated not to upset even the most prejudiced community and since the object of a mobile theatre is to bring cultural sophistication to remote areas the designer has achieved an excellent result.

The most interesting dome structures are those from southern Europe and South America. A design by RICARDO URGOITI of the Escuela Superior de Arquitectura, Madrid, is a cupola formed by a meridian of parallels containing compressed air. The dome is covered with a stressed waterproof plastic cloth. The supporting structure comprises an aluminium framework erected in easily transportable sections. The only design which includes a model is one from the University of Mexico. This project is constructed in timber laminate shells supported by a light timber framework. It has an oblong plan with an impressive entrance and ample dressing room and store space.

ION LUCACEL, of the Union des Architectes de la R.P. Roumaine, Bucharest, has submitted a square plan constructed with a light steel frame supporting a nylon tent covering. Of the two Polish contributions the design by JAKUP WUJEK and BOGUSLAW BRECZKOWSKI of the Ecole Polytechnique, Gdansk, is a fantastic composite plastic tent, the four elevations of which are made strikingly interesting by fin-like projections more pronounced at the top. The design from Greece, by four students of the Technical University of Athens, is reminiscent of the Dome of Discovery which covered the site of the present exhibition in 1951. Again the chief characteristic is a plastic covering supported on aluminium frames and braces.

Two Belgian Exhibits

Of the two Belgian exhibits one is a series of small tents arranged in a circle and connected to form a large covered space, and the other a crane-like structure supporting a large covering of stressed plastic cloth. The design by three students from the Slovak Technical College, Bratislava, Czechoslovakia, is a very ordinary light prefabricated structure comprising lightweight aluminium panelled walls and a flat roof in similar material. WILLI RAMSTEIN of West Germany has submitted a design which is essentially a large canvas supported on semi-circular trusses giving a slightly undulating roof. The covered space provided is massive, but one feels that this could have been achieved equally well with a large marquee.

The four designs from Egypt present a fantastically gaudy display of hybrid structures. One from the Faculty of Fine Arts at Cairo is a raised eliptical design, the main auditorium being covered in a multi-coloured, striped canvas. Smaller tents, very like those traditionally used by the nomadic tribes of North Africa, partly surround the main 'building' and hide the supporting framework in which dressing rooms, ticket offices, etc., are located. Another Egyptian design is a huge stressed canvas shaped like a hyperbolic paraboloid, the whole supported on light metal frames and braced with guy ropes.

Designs from Edinburgh

Among the display by United Kingdom schools are two from Edinburgh College of Art. The first is designed on a series of triangles which form three areas of seating towards a central stage. The roof is oval-shaped and slightly undulated. The second comprises two simple tent structures. The most interesting design in this section is one submitted by N. CLARKE of the Regent-street Polytechnic. It has a square plan with a central cupola as a feature. The covering is in nylon fabric which is supported from a light alloy framework and bracing. The latter projects above roof level around the perimeter of the square and to which the bracing for the cupola is attached.

TONY S. GWILLIAM of Nottingham College of Art has produced a scheme for a rather bulky looking structure to be erected in a wide variety of prefabricated parts. He calls it a 'catalogue of components, permanent yet temporary, which in twenty years would no longer be recognisable from the original design.' This student provides us with a wood block model to show the massing of the theatre's interior. A design from Liverpool School of Architecture, by J. P. ROBERTS is a three-point structure supporting a tent over a two-tier system of seating. The trucks used for transportation play an important rôle in the scheme, being used as dressing rooms, etc. A flexible design from Leicester College of Art allows for all forms of theatrical production and can be adapted as a 'theatre-in-the-round' or for the traditional proscenium stage. It is basically a triangular aluminium structure with seating based on a series of equilateral triangles and isolated from the main roof-supporting structure.

American Designs

The American designs comprise in the main those inflatable plastic shells of which much has been written. The contribution from Canada, by BARCLAY MCLEOD of the University of British Columbia, Vancouver, is a non-homogeneous shell composed of compressed air in two parallel membranes of rubber-impregnated nylon fabric. It is supported from a light steel framework. Seating arrangements are grouped in a semi-circle around a central stage with dressing rooms behind. There are other designs from Australia, Chile, France, East Germany, Hungary, Italy, Kenya, the Netherlands, Turkey and the USSR.

International Critique

AN INTERESTING EXPERIENCE in a week of interesting experiences was the criticism of the students' mobile theatre schemes in the IUA exhibition building during the evening of July 7 by Sr. Felix Candela, Professor Llewelyn Davies, Professor Frank Fielden and Mr. Michael Pattrick. Although the critics carried out their task in three groups—each tackling about a third of the exhibits—it was not too difficult to jump from one to the other to learn what was the general impression.

It was felt that the main problems, those of transportation, speedy erection and the nature of the site, were in most cases ineptly considered. Many were obsessed with problems of theatrical form, trying to produce a structure which would be suitable for every type of performance, while others became involved in complicated and costly designs, using rather dubious methods of erection. Many of these dubious techniques were described as 'airy fairy' and it was pointed out that a mobile theatre should be capable of erection in, at the most, one day and that simplicity of design and lightness of structure were the keynotes of success. Many of the designs, it was stated, were more in the nature of temporary buildings. One critic pointed out that aesthetics, the one thing that architects should never forget, had been rather forgotten in the students' eagerness to produce a solution to the technical problems. In some cases there was evidence of a close study of the project and certain designs could, with amendment, become practical propositions.

The National Federation

Stimulating Half-yearly Meeting at Blackpool

THE HALF-YEARLY MEETING of the National Federation of Building Trades Employers opened at the Imperial Hotel, Blackpool, on Thursday, June 13, under the chairmanship of Mr. Frank Russon, FIOB, President. About 250 delegates were present from the regions.

Proceedings were opened by the Mayor of Blackpool, ALD. CLIFFORD CROSS, who officially and genially welcomed the delegates. A vote of thanks was given by MR. L. J. HOLLOWAY, vice-President, the National Federation, and seconded by MR. W. LEAKE, President of the Midland Federation.

THE PRESIDENT of the National Federation, Mr. Frank Russon, then welcomed Mr. Harold Doust and Mr. Henry Wilkins, of the Australian Institute of Builders, who are in this country to present to the Duke of Edinburgh a diploma of membership of the Institute. MR. DOUST made suitable acknowledgment.

The Building Situation

In a review of the general building situation with particular reference to Federation activities, MR. RUSSON made the point that it had been one of the main objects of the National Federation since the war to convince the Government of the dangers inherent in contracting and expanding at frequent intervals the level of building activity. 'Some of you may now have so much work on hand that you may feel that the Federation has perhaps done its job too well!' he said. 'Today almost every sector is as busy as it can be. In practically every region there is a heavy load of work and there are no signs that the need for our services will slacken.'

A continuing problem was the availability of land, and this affected several sections of the industry and not only the house-builder. However, the virile publicity campaign conducted by the Federation last year in order to bring home to the nation the serious shortage of land for private house-building had had some effect. He had been pleased to note that the Minister of Housing and Local Government announced in the House of Commons last month that he was bringing together all the planning authorities in all the major conurbations to assess the supply of housing land and the demand for it. Recently, too, the Minister had advised rural councils that the trends towards home ownership were not something to be fought against. 'You may be sure,' added the President, 'that we shall not hesitate to launch another land campaign should the outcome of our continuing representations seem to make it necessary. In the meantime, we are preparing a memorandum on the re-development of urban areas for ultimate submission to the Minister of Housing.'

So far as the general economic position was concerned, however, we knew that despite the country's hopes and efforts the balance of trade and the outflow of the nation's reserves was once again at a point where the Government must feel it necessary to apply the brake. Therefore although there was a continuing heavy demand for the builder's services, the industry could not expect to be entirely unaffected by the rest of the economy, much as some would like it to be.

'In this context it is to be hoped that the Government will not be so ill-advised as to heed suggestions that have been made that building activity should be artificially restricted. Such action would destroy overnight all confidence the industry now has in the future and would do irreparable harm.' the President declared.

Increased Productivity

'Nor can anybody accuse the building industry of not increasing its productivity. Here we have succeeded where other industries have failed. But it is vital that the trend of increasing productivity in building should continue. This depends on all members of the industry and not builders alone. It will not be easy to achieve because of our labour shortages. These shortages are a challenge to building contractors' ingenuity and skill in management. I would ask you, however, to beware of the temptation to take on more building work than you can competently handle with the resources of men, money and machines at your disposal. Some firms, I regret to say, are making this mistake; the results cannot be beneficial either to the firms concerned, the clients or the industry as a whole.

Plus Rates Unrelated to Output

'Certainly no building firm really benefits in the long run from paying plus rates unrelated to output. It is now some 13 years since our industry started incentive schemes on sites and in workshops, and only about 20 per cent of all builders have worked incentives on their jobs. If we are to continue the present trend of productivity, then we must have more builders applying proper incentive schemes. Plus rates can never take the place of a properly organised incentives system, which speeds up the job, effects savings in site overheads and plant and enables capital to be turned over more rapidly.

Confidence in the Future

'Finally, on the economic situation,' continued the President, 'I would say this: The building industry should and must have confidence in its own future. There is plenty of work to be done. There is no need to scramble after every job that comes along like squirrels storing nuts for the winter. As I have said, the industry cannot isolate itself from the rest of the economy and must be ready to play its part in riding out any economic squalls which may blow up. It can best do this by going all out to surpass its target of a 6 per cent increase in production this year. This is not the time to relax from recruiting and training apprentices and students or from investing in mechanical plant and management. To think that it is would be foolish. Such a reaction would harm the firms in the industry, and indeed, hinder rather than help the national economy for years to come.'

Refreshment Breaks

Turning to industrial relations and, in particular, to refreshment breaks, Mr. Russon said there had been a great deal of talk, particularly on the Operatives' side, about what was agreed and what was not agreed in the Hours and Wages settlement negotiated last year, endorsed by the National Joint Council in January, and due to be put into effect in October. Such talk was centred on the new Refreshment Break Rule and its interpretation.

'The meaning of the new rule is perfectly plain,' he declared. 'Before, only one unpaid break was officially allowed in a working day—namely the dinner break. Now, management and operatives on a site are free to arrange their refreshment breaks to suit themselves. More than one break can be taken provided that the aggregate time does not exceed one hour. The additional breaks which it has been the practice to take on so many sites, have been taken hitherto in the employer's time. The rule did not permit otherwise. It does so now. This change is in conformity with the principle already laid down in the Working Rule Agreement that only hours worked should be paid for. When working hours are being reduced it is a logical and reasonable step that the breaks included in the paid hours should be reduced also.

Mutual Concessions

'Let me emphasise two points. First, the agreement was, as has been described, a package deal; each side had to concede something. We gave the Operatives the shortest working week and the largest hourly increase that they have ever had: in return they agreed to wait until October for it, and in addition to relax the control of overtime and to amend the rule governing meal breaks. They agreed at the time, and said so publicly, that every step should be taken to off-set the extra cost of the higher wage rate and the shorter working week. I would ask them now—"How does the rule offset these costs unless the old concessionary breaks in the employer's time are surrendered?"

'Second, employers are not seeking to stop breaks altogether. We believe, in fact, that breaks are necessary, the rule provides for them. But that is no reason why the employer or the building owner should pay for them. As the hourly rate rises the building owner, particularly the small private building owner, is increas-

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ingly opposed to paying for time which is not worked.

'Finally, it should be made clear that those who drafted the new rule were fully aware of its meaning and of its intention. If, having negotiated it fairly and squarely, the Operatives' leaders are not prepared to stand by it, I can only say that this would be a severe threat to the value of the whole of our joint machinery and particularly to the National Joint Council. It might well lead to a change in the good industrial relations enjoyed for so long in the industry.

Firm Price Tender Difficulties

'Another issue which affects building costs is firm price tendering. All builders know, or should know, that the essential principle of firm price tendering is that the designers must give us the fullest possible information and it is their duty to ascertain their clients' requirements fully before they go out to tender. This is far from being the case in many instances today. We have, however, had consultations with the Minister of Works on this and, as a result, he has asked the Ministers of Housing and Local Government, Education and Health to point out to those responsible to them how important it is that in their building programmes, they should observe their re-responsibilities in regard to proper pre-planning when calling for firm prices.

'I have also told the Minister of Works that we are not at all happy about the attitude of the material producers. If they are not prepared to accept the risk of forecasting raw materials, wages and transport costs in their own fields it seems a little unfair that builders, who presumably have less information than they, should be called upon to do so. The Minister has also been asked whether it would not be appropriate for a Government which is prepared to insist on firm prices from the building industry to lay down a similar policy for nationalised industry. At our instigation the National Joint Consultative Committee of Architects, Quantity Surveyors and Builders has recently published a statement on the subject and we would draw the attention of all concerned—private as well as public architects and building owners—to the seriousness of the position. Despite the efforts we are making to get designers and clients, as well as materials manufacturers and suppliers, to accept their fair share of the firm price burden, I feel bound to say that the continuance of firm price tendering, as a working principle for building contracts, is in danger. This is not our fault. We have tried, but, unless there is a sudden and spectacular change of approach on the part of other sections of our industry, building costs are bound to be affected, for building contractors cannot be expected to pay for the delays and uncertainties brought about by the shortcomings of others.'

Revised Form of Contract

Speaking on contract matters, the President stated that on July 27 the Joint Contracts Tribunal would be meeting to receive a fresh draft of the revised Standard Form of Contract. There was still much to be done in that mammoth task of revision, but it was satisfactory to know that all differences of opinion on matters of principle had now been resolved, so far as the members of the Tribunal were concerned, and that the work which still remained to be done was confined to technical matters.

In a somewhat related field, in view of the impact that outstanding monies—in the form of retentions and overdue accounts—could have on building costs generally, the National representatives had been in discussion with representatives of the architects and surveyors. Clearly the restriction on the liquid financial resources available to building firms added unnecessarily to the cost of building. The figures they had been able to give to their architect and surveyor colleagues surprised them and a study group had been formed to take the matter further.

Direct Labour Questions

The National Federation was also maintaining constant vigilance on direct labour. He believed (the President said) that their efforts were not entirely unconnected with the fact that the steady expansion in direct labour activities which went on throughout the 1950s had virtually been halted. It had certainly not expanded in the last twelve months. The Federation must keep up this work of protecting the industry from backdoor nationalisation.

Mr. Russon then drew attention to the work being done by the Federation for the benefit of the small firms. Very shortly the Federation would be publishing a 'Clerical and Accounting Procedure Manual' for firms employing up to 20 men and also standard forms and conditions of estimate for use by firms carrying out maintenance and repair work. The Federation was also continuing to be active on behalf of all firms, large and small, in the matter of accident prevention, and, in association with the FCEC had devised and published a standard set of crane signals.

Technical Information

The President then referred to the work of the Building Advisory Service, which had carried out over 300 assignments for building firms. In many cases it had obtained second and third assignments from the same firm. 'I cannot urge member firms too strongly to use this service,' said Mr. Russon.

Another Federation service was that concerned with technical information—a service available to members whether national contractors or small jobbing builders. Its existence means that all members had at their disposal a qualified scientist with a wealth of technical information ready to hand to assist with their queries. The President added: 'We do not intend however to stand still in this field and we are now examining the possibilities of providing a truly nationwide technical information service under our National Federation banner.'

Training and Education

Speaking on education and training, the President said that where pre-apprenticeship courses had been run they had been more than successful. He urged everyone to bring whatever pressure they could to bear on Education Authorities to introduce these courses whenever and wherever possible. At the same time, education and training in the management field must not be neglected. The wide scope for recruitment in the management field underlined once again the importance of recruiting the best type of youngsters as apprentices, for the fact was that many of those young men would inevitably be required to fill management posts before many years were past.

'I know that a lot of talk is going on in different quarters about the length of apprenticeship and about our own joint apprenticeship scheme,' said Mr. Russon, 'but you will be well advised not to allow these comments and discussions to influence your decision as to whether or not you should take on more apprentices at the present time. Of course apprenticeship is being discussed. Of course the scheme is being re-examined. But this is going on all the time, so there is no need to hold your horses on recruitment just now. In fact, with the bulge of school leavers now with us, there is every reason why you should recruit for all your worth. But for goodness sake select; don't just sign on bodies.'

Discussion

DISCUSSION, at the suggestion of the Director, Mr. Peter Trench, followed under ten heads. No one spoke on the first of these, 'The Economic Situation,' but under 'Industrial Relations,' a speaker asked whether guidance could be given on how tea-breaks could be operated without stopping work. MR. GEORGE BANKS (Southern) thought that this suggestion was a contradiction in terms. How could a tea-break be operated without stopping work? 'There should be no difficulty in controlling the time spent on tea-breaks,' he said. 'Set your hours and stick to them, and remember that there is one essential rule: "Only hours worked should be paid for".'

COL. K. J. PEARCE (LMBA) said that there was an impression current in many parts of the country that there had been a breach of faith on the operatives' part. 'There is no doubt at all what the recently signed agreement provides for,' he declared, 'but we are getting minor trades union officials up and down the country undermining the intention of the agreement. There is no doubt that a joint statement by employers and operatives would do much to help. But we must try to avoid a head-on collision with the operatives on this matter.'

Another speaker suggested that non-federated builders could cause trouble by giving way to the unions. The proposal had been made that non-federated builders should be asked to attend joint meetings to agree a policy. What was the official attitude to this?

Under the third head, Firm-Price Tenders, MR. T. V. PROSSER (Liverpool) said that builders must accept some of the blame for the present unsatisfactory position. 'We should re-consider what should be the correct emphasis in this matter,' he declared. 'At present we are pressing for full documentation at tendering time and giving as reason that incomplete information delays the start of the job. In my view we should switch the emphasis to making the point that incomplete information not only delays completion but makes it more costly because the builder is prevented from placing his orders for materials at an early stage.'

Contract Matters

Under Contract Matters, MR. ORMEROD asked whether there was any chance of getting similar conditions in this country to the USA where there was provision for getting retention moneys released? COL. A. R. MAIS (LMBA) said he was worried at the considerable amount of talk about inflated building prices. 'We should state categorically,' he declared,' 'that builders are not putting in inflated prices, but are putting in realistic prices for the first time since the war. We should contest any suggestion to the contrary.' MR. E. A. BICKNELL (Bristol) asked whether, since builders had to sign an indemnity clause for non-completion, some clause could not be devised to fit the quantity surveyor who did not settle the final account within the stipulated completion date (applause).

Under the fifth head, 'Direct Labour and Nationalisation' there was no discussion, but on the head, 'the Small Builder,' MR. CORNFORD made the suggestion that since every small builder had his own conditions of sale, it could be helpful if a uniform document were devised for general use. A standard profit and loss form could also be helpful. MR. PERKINS (Bristol) asked what the National was doing in regard to the structure of the industry.

MR. SELLERS complained that one of the major problems facing the smaller builder was the growth of the 'national' contractor, the way that he did his business and particularly the way in which he poached labour. He worked overtime at the first opportunity, under FCEC rules if necessary. Could not the National and the FCEC get together on this subject of hours of work? MR. CARTLAND said that one of the problems was that civil engineering contractors paid time-and-a-half for overtime while National Federation members paid time-and-a-quarter. National contractors were not the only ones at fault, said a speaker from Somerset. Non-federated builders often worked a seven-day week using federated labour at week-ends. MR. ORMEROD made the point that many contracts were run on subcontractors' money, and he entered a plea that quantity surveyors should give parity with main contractors to subcontractors.

Under heads 7, 8 and 9 (Accident Prevention, Building Advisory Service and Technical Information) there was no discussion, but head 10 (Education and Training) produced some lively ideas. A speaker, on the subject of day-release classes, mentioned a local education authority which had approached the local builders' association for financial assistance in organising the classes. Was this right, he asked? MR. A. J. CHANDLER (Newport) said that how best to get young men into the industry was the biggest problem. Over-employment was less the dominating factor of the present industrial scene than the limited number of craftsmen available. The industry was not doing enough in recruiting apprentices. If the Federation were to show a more dynamic approach to the subject of recruitment he, the speaker, believed it could carry the Unions with it. The next three years were vital.

A speaker from Wiltshire spoke of the effect of labour-only sub-contractors on apprenticeship. These concerns never trained apprentices; they only took tradesmen from contractors. MR. R. H. BRAYBON (Brighton) spoke of the benefits to the apprentice that could come from block-release. 'Many of the classes catering for day-release students are shutting down for lack of support in the 4th and 5th years,' he said. 'Boys are having to travel farther to other colleges, and in the end stop going at all.'

Discussion Summed-Up

THE DIRECTOR then summed-up the discussion. On the subject of tea-breaks, compromises may be necessary, but no need to talk of them now, he said. The settlement was, he thought, the finest ever made in the building industry, but he didn't see why the employers should give everything and get nothing. Direct labour (about which doubt had been expressed that its operators would fall into line about refreshment breaks) would follow once the employers had made a success of making the agreement work. He thought that the operative leaders would, if they possibly could, make the rank and file fall into line. 'If it is possible at all,' said Mr. Trench, 'we will get a joint statement, but we can't meet this trouble before it starts. Nor can we meet it as employers by being weak. And I would remind you that we may never get this opportunity again, and therefore we must not let go. All those who negotiated the agreement know precisely what has been agreed; there is no case for anyone to say that a fast one has been pulled by the employers. You, the members, must stand fast behind your negotiators or the effect on future negotiations could be disastrous.'

As for the suggestion that there should be open meetings with non-federated firms on the subject, by all means these could be held (said Mr. Trench) but members should beware of interfering with the individual management of other people's businesses.

As to firm-price tendering, he was in full agreement with Mr. Prosser's suggested change of emphasis in the reasons for pressing for full documentation at time of tendering. On general principles, the Minister of Works was adamant that there should be no reversal of official policy on firm-price tendering, and as Government departments had to do with about half of all the current building programme, the situation must be accepted for the moment. But if matters got worse, the Federation would get active.

Retention Moneys

On the question of retention moneys, a committee had been set up jointly with the RIBA and RICS, and this was looking into the problems, and also at the legal bond system as now operated in the USA. The whole question of retention moneys was under discussion with the RIBA.

Mr. Mais had raised the question of building prices. The Federation had put out 500 copies of a questionnaire, said Mr. Trench; preliminary deductions were that either builders were often mistaken in their prices or were cutting their own throats. He would leave Mr. Bicknell's suggestion with regard to the quantity surveyor who delayed final settlements, not very hopefully, to the chairman of the contracts committee and the legal adviser! With regard to Mr. Perkins' point about consideration of the structure of the industry, this matter was under joint discussion by the Federation and the RIBA. 'We have hopes, too, that Mr. Harry Weaver, the Operatives' general secretary, will join in these discussions.' As to labour poaching, the Federation would be glad to join in talks with the FCEC, but it took two to agree to sit round a table. 'We must face the fact that there are limited resources of manpower,' said Mr. Trench; 'this is a storm that must be ridden out.' On another point, he agreed that the time had come when contractors should consider effectively the treatment some of them were meting out to the sub-contractor.

The apprenticeship question was being discussed on July 19. A film about the building industry, intended for secondary schools, was under consideration. He had heard the statement that an education authority was seeking to get the local builders to make a financial contribution to running courses. 'There is no statutory provision for this,' said Mr. Trench, adding that the proposal should be resisted. On the labour-only subcontractor, there could be a case for setting-up a working party to consider the question.

In conclusion Mr. Trench said: 'I would like to endorse the point made by the President that we should have confidence in the future. The building programme will in my view continue at the present high level for some years to come, and though there may be difficulties, they will tend to lessen as we are better equipped to deal with them.

Other Sessions

On the Thursday afternoon, a paper was read on 'The Cost and Economics of Contractors' Plant' by MR. P. A. STONE, MSC (ECON), of the Building Research Station. On Friday morning THE DIRECTOR gave a talk on 'Profit Through Public Relations.' Both these papers, and a report on the ensuing discussions, will be given in 'The Builder' next week.

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The Conference Dinner

Co-operation Between Ministry and Industry

A MEMORABLE MEETING concluded with a banquet at the Blackpool Winter Gardens at which MR. W. LEAKE, FIOB, President of the Midland Federation of Building Trades Employers, presided.

MR. A. B. MOORE, BSC, Director of the Midland Region of the Ministry of Works, proposed 'The National Federation' and referred to the happy relations existing between his Ministry and the NFBTE.

Responding, the National President, MR. RUSSON, said that after the war most people in the building industry viewed the closer interest which the Ministry of Works was taking in its affairs with some misgiving; but they were all rather unprepared for the high degree of co-operation which the Federation's representatives at National and Regional levels and the officers of the Ministry had been able to achieve.

After mentioning the outstanding quality of Mr. Moore's directorship of the Ministry in the Midland Region, Mr. Russon concluded by saying that although the Federation was proud of the industry's and of the Federation's achievements there was no complacency for there was still a great deal of work to be done in improving both site operations and the administration and organisation of the industry generally.

During the evening Mr. Russon made a presentation to MR. and MRS. D. E. WOODBINE PARISH to mark Mr. Parish's 'enlightened presidency' in 1960.

A presentation was also made to Mr. and Mrs. Russon by MR. LEAKE.

Among those present at the dinner were:

Ald. & Mrs. Clifford Cross; Sir Robert and Lady Lloyd; Miss A. C. Masterton; Ald. & Mrs. I. W. Owen; Ald. & Mrs. H. Pickles; Mr. & Mrs. C. H. J. Aldworth; Mr. & Mrs. S. Ashburner; Mr. & Mrs. G. Banks; Mr & Mrs. P. H. Bates; F. W. Beazley; Mr. & Mrs. E. A. Bicknell; Councillor & Mrs. A. Bird; Mr. & Mrs. J. A. Bird; Mr. & Mrs. J. L. Booth; Mr. & Mrs. L. J. Bradshaw; R. H. Braybon; Mr & Mrs. A. C. Bryant; W. D. Bryant; Mr. & Mrs. H. Bullough; Mr. & Mrs. C. D. Calverley; Mr. & Mrs. A. J. Chandler; Mr. & Mrs. D. M. Chaston; Mr. & Mrs. H. A. Close; Mr. & Mrs. W. Corbishley; Mr. & Mrs. R. E. Costain; Mr. & Mrs. M. Craske.

Mr. & Mrs. A. K. Davidson; H. Doust, President, Australian Institute of Builders; Mr. & Mrs. C. G. Drewitt; Mr. & Mrs. J. E. Fryer; Mr. & Mrs. P. A. A. Gatehouse; Mr. & Mrs. H. V. Gough; Mr. & Mrs. G. W. Grosvenor; Mr. & Mrs. H. G. Harper; Dr. & Mrs. C. A. Hart; Mr. & Mrs. T. B. Henwood; J. Hicks; Lt.-Col. & Mrs. G. G. Hodges; Mr. & Mrs. W. Hogarth; Mr. & Mrs. L. J. Holloway; C. P. Howells; Mr. & Mrs. W. J. Huddlestone; F. O. Jayne; Mr. & Mrs. W. S. Jones; Mr. & Mrs. T. W. Jowett; Mr. & Mrs. H. Langford; Mr. & Mrs. W. Leake; Mr. & Mrs. A. R. Mais; Mr. & Mrs. R. F. Mansell; Mr. & Mrs. M. E. Marshall; Mr. & Mrs. B. Moore.

Mr. & Mrs. D. E. Woodbine Parish; Mr. & Mrs. L. G. Pearson; Mr. & Mrs. T. V. Prosser; Mr. & Mrs. A. W. Radford; Mr. & Mrs. J. Ian Robertson; Mr. & Mrs. C. G. Rowlands; Mr. & Mrs. F. S. Harman; Mr. & Mrs. G. Slack; Mr. & Mrs. P. T. Smith; Mr. & Mrs. W. J. Smith; Mr. & Mrs. E. Smitton; Mr. & Mrs. B. F. Stanbury; Mr. & Mrs. A. A. Stott; Mr. & Mrs. J. B. Tompkinson; Mr. & Mrs. A. Tomlinson; P. E. Trench; W. E. Tyson; Mr. & Mrs. H. W. Wake; Mr. & Mrs. L. A. Walden; Mr. & Mrs H. E. Wildgoose; Mr. & Mrs. V. T. Williams; Col. & Mrs. J. Henton Wright.

The Week in Parliament

From Our Own Correspondent

Framing New Building Regulations

A PROPOSAL to write into the present system of building by-laws the appeal procedure which will be adopted when the new building regulations come into force was turned down by SIR KEITH JOSEPH, Parliamentary Secretary, Ministry of Housing and Local Government, when the committee stage of the Public Health Bill began on July 11. He maintained that by adopting this course they would be deferring the achievement of the objective which everyone shared.

All the clauses dealing with the building regulations were agreed to by the Standing Committee of MPs.

MR. JAMES ALLASON recalled that under the 1936 Public Health Act there was no appeal against the refusal of a local authority to apply for a waiver in the case of a building of unusual construction which did not come with the by-laws. The Bill recognised this serious defect and granted right of appeal. At the moment these waivers were being applied for by some local authorities but not others. The procedure was a little beyond some local authorities, particularly the smaller ones.

'There is a great need for the granting of waivers,' he said, 'because the building by-laws—or the regulations as they will become—must always allow for the worst. A great advance in building design is going on all the time and is leading to forms of construction which, while not complying with the building by-laws, are quite safe and satisfactory.'

Timber Construction

Great advantages were to be found in timber construction, especially in speed of construction, and it had been estimated that as much as 15 per cent. of the cost could be saved by using modern methods of construction. Since about £70m. a year might well be spent on these timber construction houses, it was evident that a saving of 15 per cent would represent £10m. a year. He gave this example to show the urgent need for granting this power of appeal at the earliest possible stage.

He knew that the new building regulations would provide this, but they were likely to take some time to work out. In Canada they took over four years to devise and he did not suppose they would take any less time here. It would be optimistic to say that the building regulations for Scotland would be finally approved next year or even the year after. A direct loss to the country could not be afforded for four or five years. The Bill provided an excellent opportunity for applying an appeal procedure immediately.

MR. ALBERT COSTAIN, supporting the amendment, said much opportunity was being wasted in the building industry because building owners, architects and contractors could not appeal direct to the Minister. He regarded the appeal procedures as the perfect method of obtaining market research and of providing information which would be of use in framing the new building regulations.

SIR KEITH JOSEPH, seeking to point out the differences between the building regulations as proposed in the Bill and the present system of by-laws, said the regulations would be divided into three classes. There would be those—relatively few—building regulations which would be sacrosanct, in respect of which no appeal would be allowed either to a local authority or to the Minister.

There would be a larger but still relatively small class in respect of which an appeal for relaxation must go to the Minister only, with no discretion in the hands of local authorities. Finally, there would be by far the largest class, in respect of which discretion would be given to local authorities but in which an appeal to the Minister against refusal by a local authority would be available to the applicant.

'This is a complex system,' he declared, 'designed to give discretion where it is most suited, and it is not appropriate to try and make it apply to a system of 1,400 marginally different sets of by-laws. It would take an enormous amount of administrative work by the Minister to classify those 1,400 sets of by-laws into the three categories, even though 70 per cent are based on the model by-laws.' The appeal and advertising procedures in the Bill were designed to suit a system of tripartite distinction between different sorts of building regulations. It was not easy to write these automatically into the present system of by-laws.

SIR KEITH said he was sure it was true that some local authorities adopted a relatively obstinate and over-cautious attitude to modern techniques. In those cases, if the local authority were to agree, the Minister, considering the merits of individual cases, might agree to relaxations which were not now available to the applicant. But these were relatively rare cases. By far the larger number of cases were borderline cases where it was not obvious that the local authority was wrong and it would be false to argue by analogy that fantastic savings running into millions would automatically be made available to the economy.

A Warning Note

He must utter a strong note of warning. The 15 per cent saving was not a 15 per cent saving on the total cost of the building but, he was almost sure, a 15 per cent saving on the frame of the building. Secondly, the consideration whether a timber-framed building should or should not be allowed was not just a matter of the construction of the building but a matter of the relation between that building and other buildings. What was proposed in the amendment would defer the introduction of the building regulations.

The amendment was negatived.

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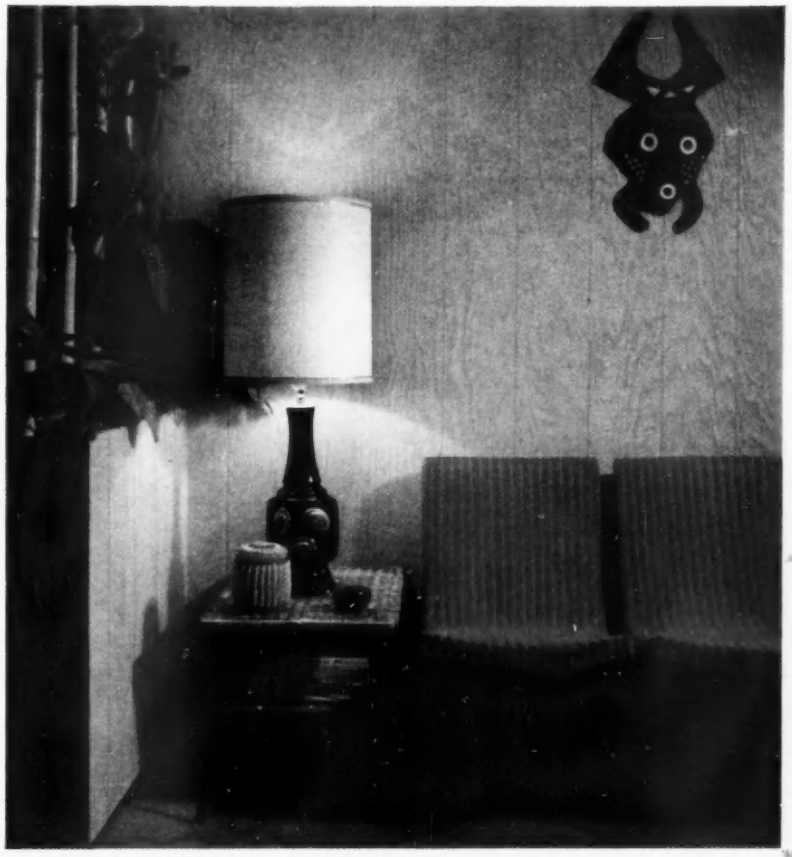

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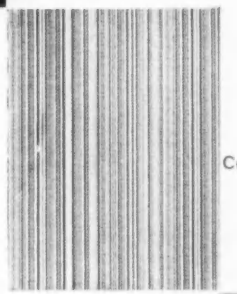

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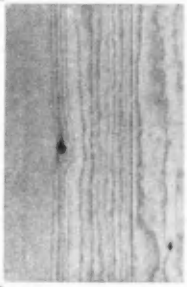

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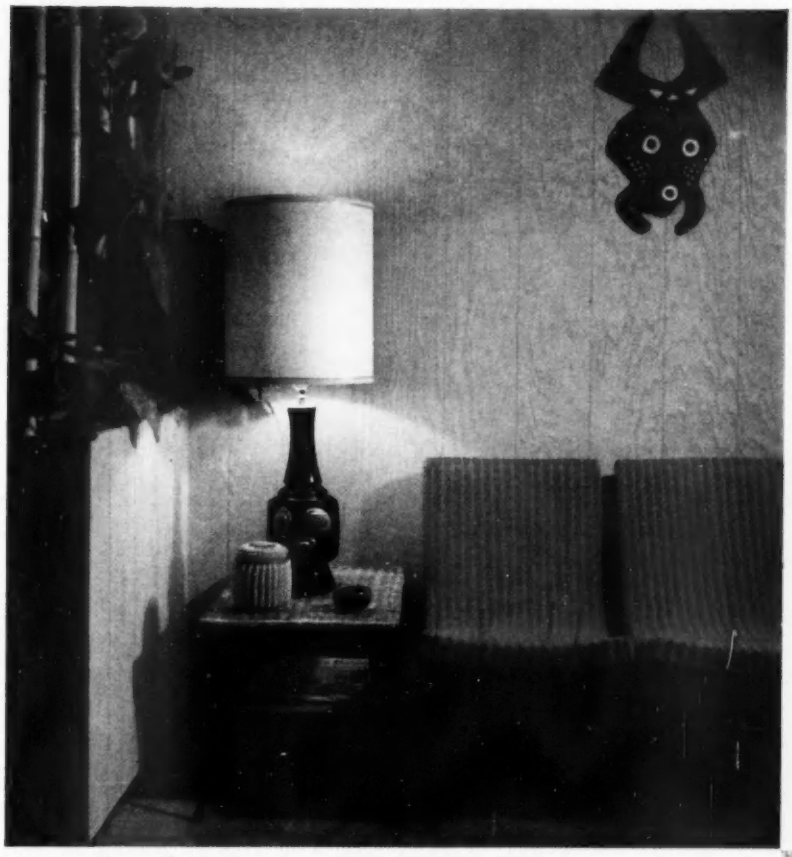

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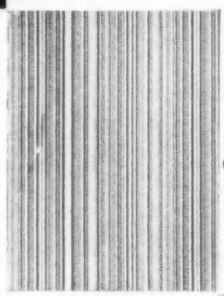

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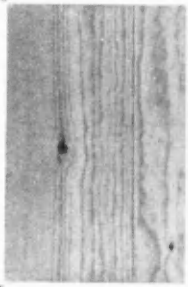

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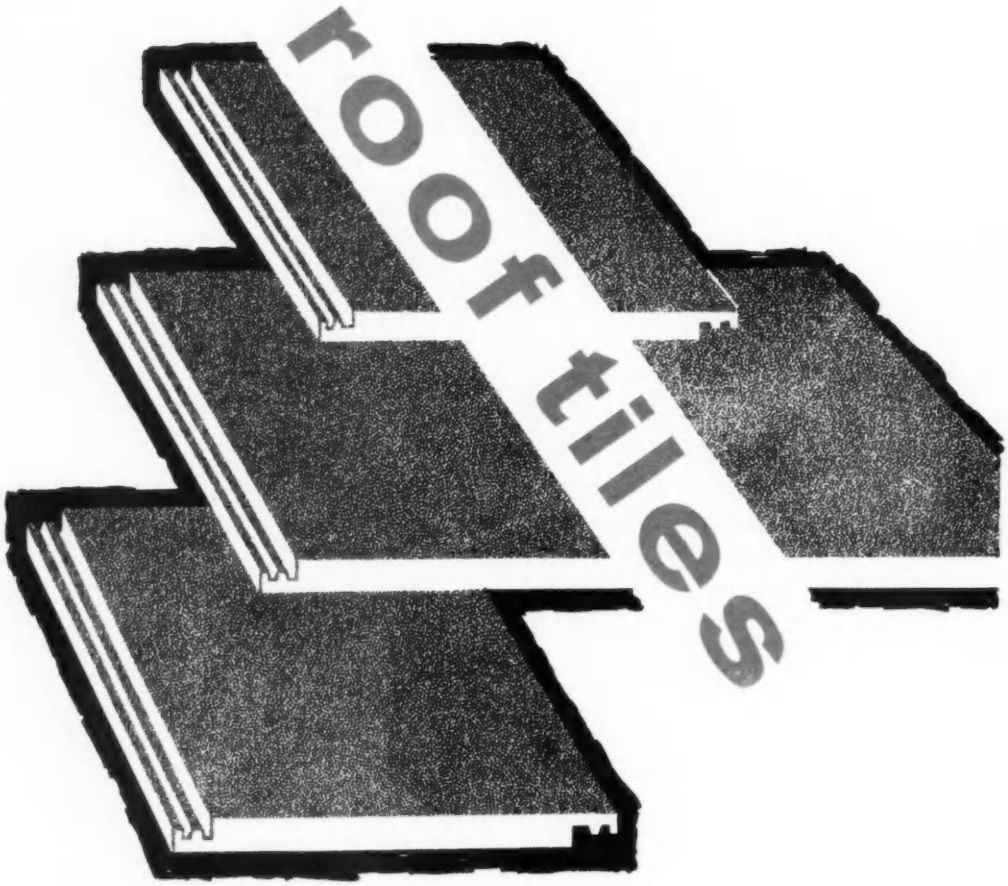

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Royal Institution of Chartered Surveyors

Papers at Annual Conference, Leicester

From papers read at the annual conference of the Royal Institution of Chartered Surveyors in Leicester, held from July 4-7, we take the following extracts:

The Professions in Contemporary Society

BY LORD JAMES OF RUSHOLME

DANGERS of uncontrolled professionalism were emphasised by LORD JAMES OF RUSHOLME, High Master of Manchester Grammar School, speaking on the professions in contemporary society.

'There is,' he said, 'a tendency to value examinations as hurdles to be got over, to visualise education as a kind of hurdle race and to overvalue the possession of certificates rather than the possession of true knowledge. There is always the tendency for a profession to value and retain out-of-date and irrelevant entrance requirements because they are, as it were respectable.' Ordinary level Latin was taken, he added, not because of its value but because Latin was OK or a U subject and it was the mark of a professional man to know it. A very real danger in the growth of professionalism was that it might create something to study so that its members might be qualified by having studied it. The best aspects of professionalism were that professional people were dedicated to certain codes which at their best were higher than the legal and normal requirements of the community.

Professional status, Lord James continued, must not be regarded merely as a symbol conferring prestige. Professional status might confer prestige, but much more important, it conferred responsibilities. Schools and universities must give professional people not only their expert knowledge but a general education as well.

Lord James said that on professional men who realised their responsibilities depended a great deal of the quality of our national life; that was why we must not be too scornful of the spread of professionalism or the spread of professional ideas to new groups.

Ironstone Workings and Land Restoration

BY R. J. COWAN, ARICS, AMIMUNE

'WHEREVER ironstone is worked, whether by opencast or underground operations, there will be particular problems arising in connection with the actual working of the ironstone and the after-treatment of the worked-out land,' said MR. R. J. COWAN, ARICS, AMIMUNE, in an address to the Conference. 'For a time, restoration by afforestation was the only practicable method, but, with the help of improved earth-moving equipment and the financial provisions of the Mineral Workings Act, 1951 restoration to agriculture is now the general policy, with the planning authorities having the overriding power as to the degree to which it should be carried out.'

It was estimated, he added, that the Fund had paid out a total of £600,000 on levelling, including the spreading of topsoil, and a further £200,000 in grants authorised by the Minister of Agriculture, Fisheries and Food towards bringing the land back to a good state of cultivation and for the afforestation of worked ironstone land.

Modern Techniques in Quantity Surveying

BY B. D. HENDERSON, FRICS

'THE CURRENT TENDENCY seems to be for experiment in the use of systems whereby traditional working-up is reduced or eliminated,' MR. B. D. HENDERSON, FRICS, told the Conference in an address on 'The Modernisation of Techniques in Quantity Surveyors' Offices.' He described four systems which partly eliminated traditional working-up:

(i) Elimination of abstracting by billing direct: the taking-off is done in such a manner as to measure as many items as possible of any one trade in one section of taking-off and also as to reduce the amount of collecting of similar items. Sections are taken off with adjustments for windows, doors, etc., at the end of each main section. In the case of 'finishings,' deductions are measured followed by finishing to reveals, etc. This ensures that the bulk of 'finishing' items are grouped together in one section of dimensions.

(ii) Elimination of the preparation and checking of abstracts by taking-off direct on to abstract: a disadvantage of this is that the dimensions are not able to be altered readily during the taking-off, in the event of a revision to the draftings. Single foolscap dimension/abstract sheets are used with very few items on a sheet—in many cases only one or two. This, in effect, is almost a loose-leaf system.

(iii) Elimination of billing by using full descriptions on abstract and editing abstract as a draft bill: a development of the system is the pre-printing of 'pro-forma' abstract sheets, with adaptable headings where possible.

(iv) Elimination of billing by a card system of abstracting: taking-off is done in the normal way, and then each item is abstracted on to a separate card (which may be coloured for each trade). After having been cast and reduced the cards (which are in bill order) are edited, renumbered if necessary and sent to the printers.

He then went on to describe other systems which completely eliminated traditional working-up:

(i) 'Loose-leaf' systems: each item being taken off on a separate dimension sheet. When taking-off is completed, dimension sheets are sorted into trades and then into bill order. The order is checked; descriptions are altered as necessary; preamble sheets, heading sheets, end-clause sheets, etc., are inserted where necessary. After squaring, casting, collecting and reducing, a draft bill results which is ready for final editing. Bill stencils can then be cut, or the shuffled sheets sent to the printers.

(ii) The 'trade by trade' system: each item being taken off as a separate entity in the order in which it will eventually be billed, including all relevant deductions.

In comparing these alternative systems, Mr. Henderson said: 'Loose leaf systems are based on a well-tried method of taking-off, following logical sequences of measurement based on the functional requirements of a building. The "trade by trade" system although an excellent method of producing bills of quantities, is not a "system" of taking-off as such, since the order of taking-off is not dependent on any systematic method but merely on an order of billing based (south of the Border at any rate) on the somewhat mis-named Standard Method of Measurement and current billing practice.'

Speeding-up Final Accounts

On the subject of final accounts, Mr. Henderson explained that it was possible for the measuring, pricing, agreeing, extending and totalling entailed in producing any variation account to be dealt with in one document at virtually the same time. This was done by using ruled paper similar to 'estimating paper' ruling. The items were priced, extended and cast in the order in which they were measured, and a summary of the variations prepared in the form of a statement of final account. He suggested that the adoption of this type of technique would go a long way towards achieving a speed-

ing-up of the settlement of final accounts.

Another method of producing final accounts was to book measurements direct on to abstract. This technique had been employed successfully over a long period on large jobs, and had been found to be as speedy as traditional booking. Other improvements which he thought could be made were a complete change-over to the metric system and a greater use of standard preambles and descriptions.

The Profession of a Surveyor

BY SIR WILLIAM HART

SPEAKING on 'the Profession of a Surveyor,' SIR WILLIAM HART, CMG, Clerk of the London County Council, said: 'Unlike those who live by buying and selling, the professional man does not seek unlimited personal gain: he is not, if you like, directly taking part in the rat race. Instead, payment of his proper fees can command skilled advice given within a confidential relationship based on, and limited by, an integrity springing from devotion to the ideals of his profession.' He went on: 'This conception of the professional outlook serves to distinguish a true profession from the illegitimate extension of its meaning by which people strive for a false enhancement in status without any real attempt to improve standards.'

On the subject of ignorant or inexperienced people being misled by unscrupulous agents, he said: 'The public sees and hears the worst of these cases without understanding what distinguishes the professional surveyor from those whom one may compendiously call accommodation agencies. All tend to be lumped indiscriminately together as "estate agents." This is not good for the general public, who need protection, nor for the reputation and standing of surveyors. I understand that the Royal Institution of Chartered Surveyors and other professional societies are considering the possibility of statutory registration. From the cases of which one hears from time to time, the sooner this is done, or some equally drastic remedy is found, the better.'

'Recent developments have brought many more comparatively humble people into the field of house ownership than used to be the case,' he said. 'One of the problems, it seems to me, is to ensure that they should know when they need advice and where to get it. In this the surveyor is in somewhat the same place in relation to property as a general practitioner is in relation to medicine. He should be the first person to whom the owner or occupier—and the prospective owner or occupier—turns for advice.'

Increased Redevelopment

Finally, on the subject of redevelopment, Sir William said: 'Schemes are becoming more difficult, as the limitation of sites imposed by planning and the wearing out of existing buildings encourage redevelopment. The likelihood is that urban redevelopment must continue at a mounting rate and give opportunities to the surveyor to make even a greater contribution than at present. The big schemes, from new towns downwards, and the smallest schemes all involve planning, both in its broadest and narrowest sense. Essentially this must be a team job. It is neither the monopoly nor the right of any one profession. The surveyor is principally concerned with the economic aspect, but this is not in such conflict with the aesthetic as is too often thought to be the case.'

Urban Redevelopment Policies

BY PROFESSOR PHILIP H. WHITE

'ONE OF THE MORE CURIOUS FEATURES of the twentieth century has been the tendency to create conditions of land tenure which, in the effects on mobility of population and resources, seem to have much in common with feudal practices.' This was stated by this year's Gold Medallist of the Royal Institution of Chartered Surveyors, PROFESSOR PHILIP H. WHITE, MSC, of the University of British Columbia, Canada. He was addressing the Chartered Surveyors' Annual Conference on 'Urban Redevelopment Policies.'

He went on: 'The Rent Restriction Acts are an obvious example, and there must be millions of families in Europe who have acquired protracted rights of occupation which the landlord can hardly bring to an end and the tenants have every incentive not to do so. The effects of this legislation are many, but by the neglect of building maintenance which it has caused, and in particular the restrictions imposed on obtaining possession for redevelopment purposes, as well as the disincentive to investment in rental housing, the Rent Restriction Acts have probably been the biggest single hindrance to more effective redevelopment in the private sector.'

Rating of Site Values

Professor White also commented on the system of taxation for local rates: 'If occupation rather than ownership is taxed, and the basis of assessment is annual value attributable to existing use only, there is little chance of taxes exceeding current revenue, and in any case the owner can always avoid payment by leaving the property vacant. In such a case, redevelopment assumes no urgency. . . . But, if the basis of assessment were site value, taking into account potential as well as existing use, and the legal liability were placed on the owner rather than the occupier, then the situation would be reversed. As site values increased with improving prospects of redevelopment, then . . . taxes would increase, with a diminution in the net returns from current existing use. In this situation, there would be a positive financial incentive to terminate existing use as soon as possible.'

There was, however, an alternative to the extreme of rating site values: 'In Canada and the United States, the basis of assessment commonly adopted for local property taxation purposes is capital value, the tax being on ownership rather than on occupation, and the site and buildings are assessed separately without regard to the existing use rule.' As a result, any procrastination was apt to prove expensive to the owner, but this in itself often led to unsatisfactory stop-gap development to cover the increased costs.

Income Tax on Property

On the subject of income tax on landed property, he said: 'For reasons not readily apparent, the owner of a building in Britain is taxed as if it never suffered any loss in value beyond that which can be restored by repairs and maintenance; in other words, there is no allowance for depreciation in the computation of taxable income, except in the case of industrial buildings—where the avowed purpose is to encourage capital investment in this form of development. . . . There can be little doubt that if depreciation allowances for income tax purposes were given on buildings generally, the redevelopment process would be accelerated because the net returns from redevelopment would be increased in comparison with those from existing use.'

Finally, Professor White admitted that no effective means had yet been found to measure both the costs and benefits of alternative schemes of urban redevelopment: 'The measurement of monetary costs and returns is easily managed, but the social benefits and costs cannot be expressed in those terms, and even if it were possible there would be widely divergent views on their value. It is presumably one of the merits of politicians that they feel competent to resolve predicaments of this kind.'

Books Received

**** *Books noted in these columns may be obtained on application to the Book Dept., 'The Builder,' 4 Catherine-street, Aldwych, WC2. Cash (to include postage on books to the value of 10s., 9d.; over 10s., 1s. 6d.) should accompany the order.*

SURFACE STRUCTURES IN BUILDING. By Fred Angerer. (London: Alec Tiranti Ltd.) Price 18s.

THE ELEMENTARY PRINCIPLES OF REINFORCED CONCRETE DESIGN. By W. H. Elgar. (London: Architectural Press.) Price 18s. 6d.

PRESTRESSED CONCRETE CYLINDRICAL TANKS. By L. R. Creasy. (London: Contractor's Record Ltd.) Price 35s.

FAILURE AND REPAIR OF CONCRETE STRUCTURES. By S. Champion. (London: Contractor's Record Ltd.) Price 35s.

PUBLIC CLEANSING: PRESENT AND FUTURE. By A. G. Davies. (London: E. & F. N. Spon Ltd.) Price 40s.

Materials Research at the BRS

Improved Facilities Available in New Laboratory

FROM OUR SPECIAL CORRESPONDENT

A NEW MATERIALS LABORATORY, which will provide extended facilities for work on the oldest of the Station's activities, was officially opened at the Building Research Station, Garston, on July 7 by Sir Harry Melville, KCB, FRS, Secretary of the Department of Scientific and Industrial Research, and was available for inspection during the Open Days held during last week. The building itself, which has been designed and built by the Ministry of Works at a cost of £260,000, will be illustrated in an early issue.

The new laboratory forms part of the plan for the long-term development of the Building Research Station. Further buildings expected to be erected in the next few years will be concerned with heating and ventilation, lighting, sound and acoustics, and engineering.

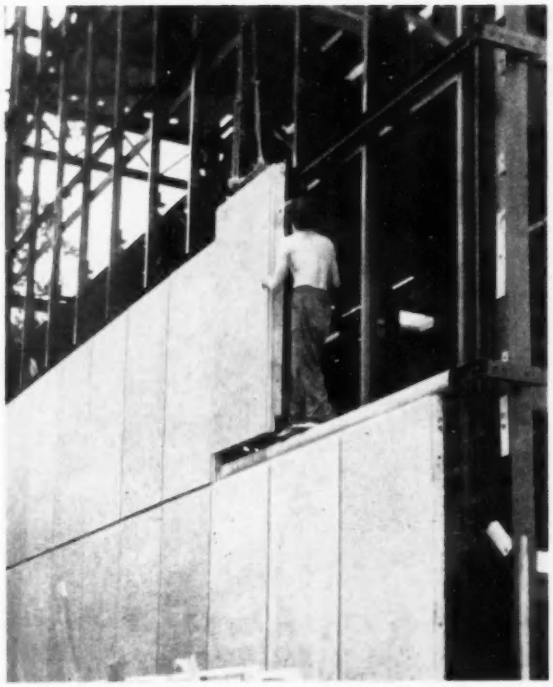
The materials work at the Station covers all building materials except timber (this is the concern of the DSIR's Forest Products Research Laboratory) and ranges from fundamental laboratory research to pilot scale manufacture of, for example, perforated bricks and lightweight aggregate. Considerable emphasis is placed on research into the behaviour of materials in use—questions of durability, the mutual compatibility of materials, and the effect of design detailing on the performance of materials in use. The work demands a knowledge of the basic physical and chemical properties of the materials, and this is the broad category of work to be carried out in the new laboratory.

Work of this kind demands facilities providing controlled temperatures and humidities for experiments at arctic conditions and at high ambient temperatures, and a range of rooms is provided for this. The new building has also given an opportunity to add new apparatus. In particular an electron microscope will greatly extend the range of observations into the constitution of cements and the mechanism—still not fully understood—of the cementing process.

Apart from the emphasis on the behaviour of materials in use, much effort goes into stimulating entirely new developments (e.g., the perforated brick) and into utilising industrial waste products (e.g., lightweight aggregate from pulverised fuel ash), for which the Station has pilot-scale facilities; but these major changes can only successfully come about if they are supported by reliable background knowledge. The new laboratory will provide facilities for increasing the fund of necessary background knowledge.

Details are given below of four of the more important items of research being carried out at the Station in this field.

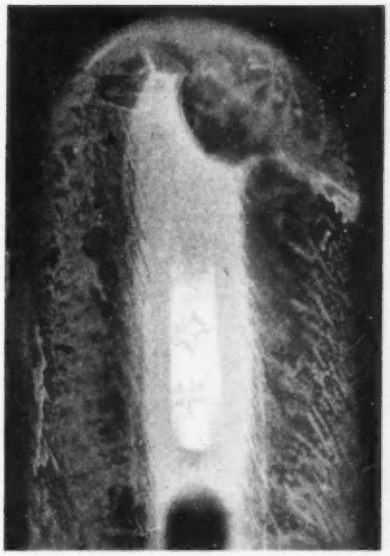
Fixing concrete cladding slabs during construction of the new Materials Laboratory at the Building Research Station



Cement Research

The special requirements of a complex modern building industry have given rise to the need for a whole range of cements with special properties. The tailoring of cement properties to fit a special need may be accomplished in two main ways: by modifying the constitution of the cement, through the raw mix or method of heat treatment, or by additions to the cement during or after grinding. From this two main branches of research arise concerned with cement constitution and the chemistry of the setting process (hydration).

Research on the constitution of Portland cement (which comprises about 90 per cent of all cement used), and on its setting mechanism has been in progress at the Station for nearly 30 years. The present Director of Building Research, Dr. F. M. Lea, CB, CBE, introduced in 1930 high-temperature chemistry techniques to the Station for the study of cement constitution. Since then the Station has been in the forefront of cement research throughout the world.



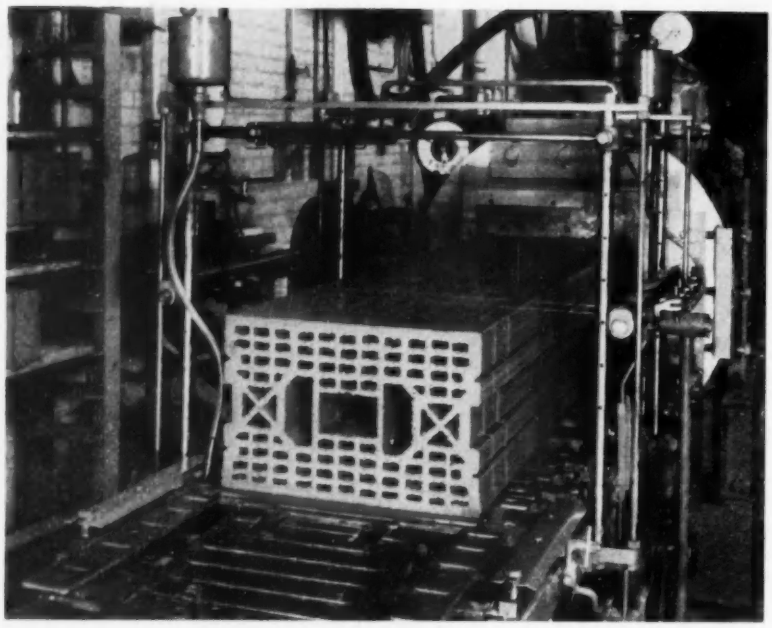
Lime crystals in a melt at 2,000°C in the high-temperature microscope. The dimension of the hairpin-shaped wire (½ mm) gives an indication of the magnification

High-temperature studies are now greatly facilitated by the development at the Station of the high-temperature microscope and its associated high-temperature X-ray camera. These instruments allow direct observation of phase changes in cements at high temperatures (up to 2,000°C). These phase studies are currently helping to determine the extent to which blast furnace slags of differing compositions can be incorporated into cement mixes without introducing undesirable properties into the finished product.

The Station's background knowledge of cement chemistry allied with recent research techniques, has allowed the establishment of a successful cement manufacturing industry in Uganda.

The effect of additives to cement on their setting properties and strength is also being studied; in particular investigations are being carried out of the possible effect of calcium chloride, which is added to cement to obtain rapid hardening, on the corrosion of reinforcing steel.

The chemical composition of set cement is being studied using several well known techniques, including X-ray diffraction, differential thermal analysis and



Extrusion of the V7 brick in the BRS pilot brickmaking plant

infra-red spectrometry. An electron microscope, recently acquired, will now also be used in this work. The general aim of the work is to explain the properties of set cement, especially shrinkage, in terms of its constitution and physical structure; and also to examine the rates of reaction and reaction of products and their effect on the setting of cements.

Perforated Bricks

Perforated bricks based on the Station's V brick designs are now in limited commercial production and have already been used in several building projects. Their adoption by the industry will bring seven years' work at the Station to a fruitful conclusion. In 1954 officers from the Station visited the Continent to study the usage of large perforated clay units. This led to the development of various types of clay bricks thought suitable for building in this country. Having established that the vertically perforated (V) brick had superior resistance to rain penetration to the earlier horizontally perforated (H) bricks, the research team set out to refine the perforation pattern to make a brick which was a satisfactory alternative, or supplement, to existing building bricks.

The V brick is twice the size of a normal brick, yet because of its perforations it has only the weight of one normal brick. It allows the equivalent of a two-leaf cavity wall to be built in one operation.

Successive patterns (V1, V2, V3, etc.) were designed; dies made at the Station were used in the pilot brick making plant; and sufficient quantities of each pattern were made, from many different types of clay, for experimental walls to be built and tested for strength, rain penetration, ease of laying, ease of manufacture, and fire resistance.

The V5 was the first design to appear satisfactory in all respects and this was the design adopted for the first commercially produced V bricks which were used in the construction of some old peoples' bungalows at Aylesbury.

Further refinements are now being tested and experiments are in progress with the manufacture and use of units larger than the conventional brick.

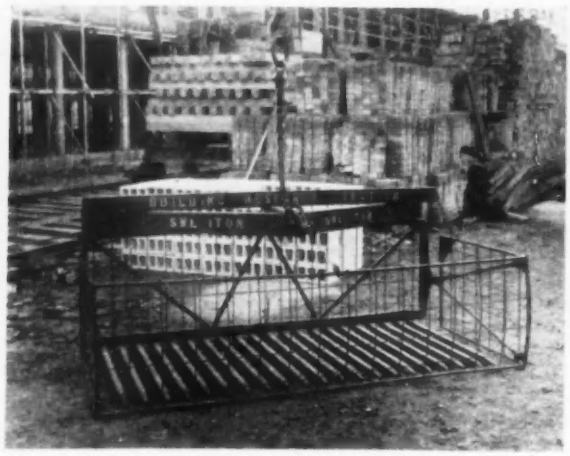
Flooring Research

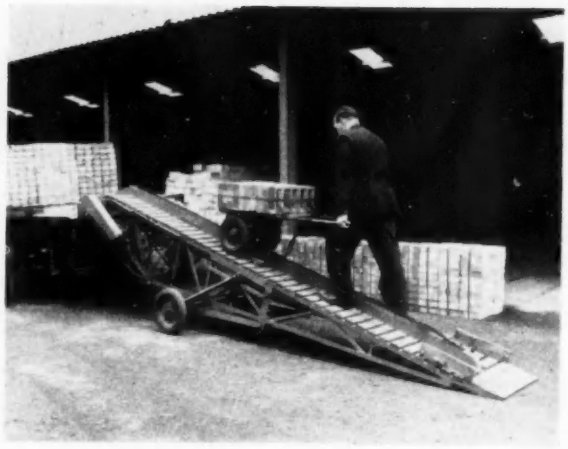
Though the behaviour of many well-established flooring materials is known through many years of experience, it is desirable nowadays to be able to assess quickly in the laboratory the probable life and behaviour of the newer materials. The usual machines do not reproduce the conditions of wear found in service. In order to identify the way in which a floor surface is worn by foot traffic the Station undertook a basic study of the forces applied to the floor by a foot in walking. The results of this work have been published recently.

The forces of walking were measured using a 'force plate' which enabled the horizontal and vertical forces, and the torque, between a foot and the floor to be measured. The area of the foot in contact with the floor and the period of contact were established using cinephotographic techniques. Values were obtained for a wide range of people (both men and women), and a statistical analysis of the results gave data for the design of a machine to simulate the effects of foot traffic.

A wear-testing machine based on this design has now been constructed at the Station and work is in progress to correlate the wear results obtained from the

Left: A device developed at the Station for handling hollow clay flooring blocks. Right: Power-driven conveyor ramp for loading vehicles with packed bricks





What kept the Joneses up so late last night?

DECIDING THE BEST BOILER TO RUN THEIR CENTRAL HEATING—THEY'VE PICKED A POTTERTON

They've picked a Potterton boiler because it's efficient—they don't have to fuss and fiddle with it; fully automatic—they set it, forget it; simple to install—packaged unit cuts down the time the installer is in their home; easy to maintain—they only need to have it looked at once or twice a year.

They've picked a Potterton because big, unmissable advertisements have told them why it pays to put in a Potterton. They've picked a Potterton because delivery is immediate.

Potterton boilers are available ex stock from Gas Boards and Potterton Appointed Distributors. That means bigger demand. Put your weight behind this campaign. Promote Potterton. It pays.

They've picked a Potterton AOA 42 because it's quieter. Its remarkably low noise level results from the fitting of an exclusive new burner. Compactly designed, all components are enclosed within its elegant, clean-line casing.

Potterton Boilers at the heart of efficient central heating—oil or gas

THOMAS POTTERTON LIMITED, 20-30 BUCKHOLD ROAD LONDON S.W.18 VANDYKE 7202 *Potterton is a registered trade mark* A MEMBER OF THE DE LA RUE GROUP

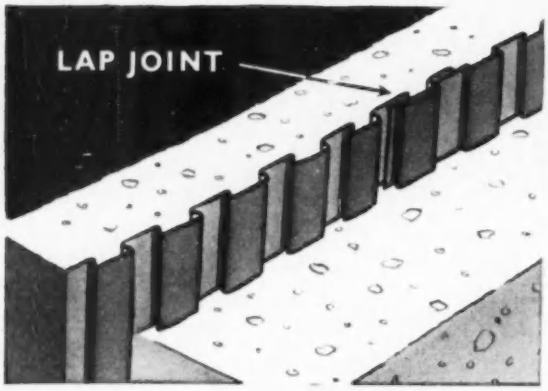
EXPANDITE

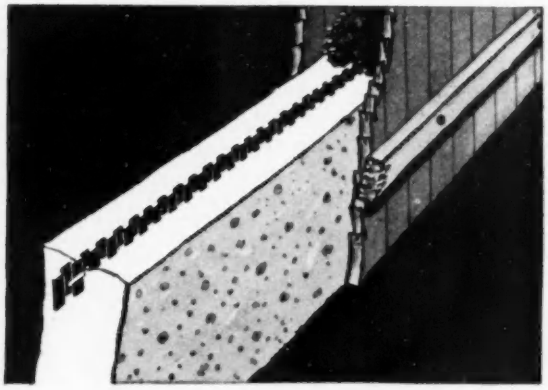
CORRUGATED FIBRE WATER BAR

For lift joints and other applications where cost is of prime consideration and there will be NO movement

Manufactured from a tough, fibrous material, reinforced with mild steel strip, and dipped in pitch, the Waterbar solves the problem of providing an efficient waterstop for the minimum outlay.

Installation is simple: The Waterbar being either pre-positioned before the concrete is poured or pressed





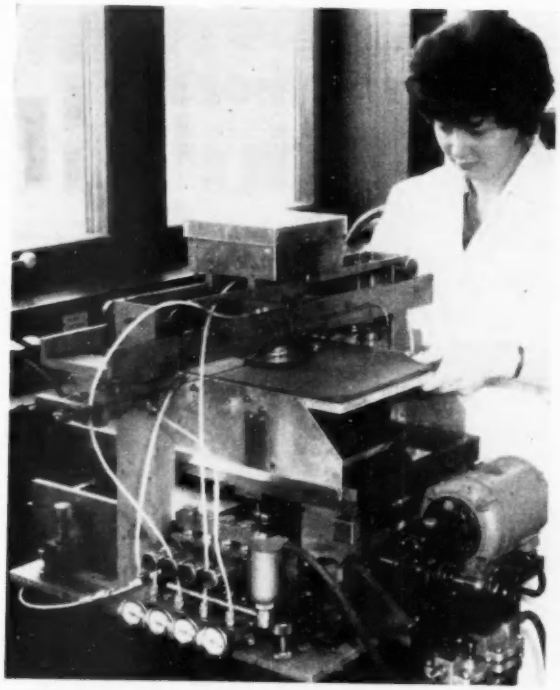
into the wet concrete before final compaction is undertaken. The Expandite Corrugated Waterbar is supplied in 6 ft. lengths, but should a longer section be necessary, the individual strips are merely overlapped for one or two corrugations.

Full details from:

EXPANDITE LIMITED

CHASE ROAD, LONDON, N.W.10. Telephone ELGar 4321 (10 lines) ELGar 1551 (10 lines) Telex 25420
Trafford Park Road, Manchester 17. Telephone Trafford Park 1285/6
36 Great North Road, Newcastle-upon-Tyne 2. Telephone Newcastle 23992
EXPANDITE (IRELAND) LIMITED, Greenhills Road, Walkinstown, Dublin. Telephone 501512

ASSOCIATES AND DISTRIBUTORS THROUGHOUT THE WORLD



Inserting a flooring sample in the new wear testing machine

machine with results obtained in practice. Special flooring panels have been installed by the Station at the ticket offices of busy London Undergound stations; the number of tickets sold gives a good indication of the amount of traffic on the floor surface. These panels are removed at intervals and the wear is measured; it is interesting to note that stiletto heels have had no visible effect on these panels. With a little further refinement it is expected that the wear-testing machine will adequately reproduce the actual wear conditions and it should then be possible to predict the behaviour of new materials about which there is no practical experience.

PFA as Aggregate

Furnace clinker, formerly available from power stations burning graded coal, has become scarce with the changeover to pulverised fuel firing. This clinker was widely used in the concrete industry for blockmaking and its scarcity was causing difficulty since no alternative material was available at the price. Added to this the very large quantities of pulverised fuel ash requiring disposal was causing some anxiety.

The Station undertook the study of this problem to see if the unwanted pulverised fuel ash could be converted, in a cheap process, to a suitable lightweight aggregate which could be used as a substitute for the scarce clinker.

Pulverised fuel ash contains some unburnt fuel and this has been shown to provide sufficient heat to effect sintering without additional fuel. The pulverised fuel ash itself is pelleted by rolling in a shallow pan under a fine water spray. These pellets are then fired on a sinter-strand, where they burn to a temperature of about 1,200°C and form hard lightweight aggregate. This can then be crushed to obtain any desired grade of aggregate.

Alternative methods of sintering have been examined by the Station, and the relative merits of the shaft kiln and sinter-strand have been studied. It has been shown that whilst a relatively narrow range of residual fuel content is needed in the shaft kiln, the sinter-strand will work satisfactorily on a much wider range of fuel contents.

Commercial Use

The installation of additional plant and modifications to existing equipment have enabled further experience to be gained in the conversion of pulverised fuel ash into lightweight aggregate, which is now established on a commercial scale.

The Central Electricity Generating Board, who have supported the Station's work on lightweight aggregate manufactured from pulverised fuel ash, are now lending their support to further research into the cementitious properties of pulverised fuel ash. Parallel developments by industry have led to the commercial production of these materials; basic operational and design data was supplied by the Building Research Station.

European Ceramic Conference

Co-operation in Research

A MEETING was recently held in London of the European Ceramic Association, under the presidency of Mr. G. N. Hodson, MBE. In a review of the past year's work it was stated that attention had mainly been devoted to investigating the extent to which the ten countries could co-operate in matters of research. The investigations showed that there was a great deal of common ground. Discussions in London indicated that because of the excellent spirit of understanding that existed substantial time and expenditure could be saved on basic research through rationalisation of the programmes in different countries. In this way considerable benefits could be achieved in the commercial and scientific fields.

Concern was expressed at the development of new materials, some of which could be strongly competitive with ceramics. The directing committee decided to urge all the representative bodies in the different countries to take steps to establish the image of the range and importance of ceramics, socially and industrially. It was suggested that close attention should be paid to public relations in order to ensure that these products were made known and that their outstanding technical qualities were widely publicised.

It was pointed out in connection with the Common Market that the European Ceramic Association provided valuable opportunities for meetings of the Six and Seven countries to discuss problems that were likely to become of general interest.

The 8th International Congress of the European Ceramic Association will be held at Copenhagen in May, 1962.

Measuring Wood's Elasticity

A TDA Research Report

SINCE wood is a complex cellular structure, lacking homogeneity, assumptions governing the theory of elasticity do not strictly apply to it. Its properties vary in different directions to the grain and no two trees are exactly comparable. To state with confidence the range of values for any one property likely to be associated with a given species, tests must be made on many samples cut from different trees in different localities and the results statistically analysed.

In a new TDA research report 'A Non-Destructive Method for Measuring the Elastic Anisotropy of Wood Using an Ultrasonic Pulse Technique': I. D. G. Lee, BSc(Eng.), AIWSc (TDA reference E/RR/9), a method of testing alternative to static loading and slow vibration is described. By adopting the method outlined in the report it is possible to use the same specimen for all measurements in any one plane. Thus, extraneous variations resulting from irregularities of growth are greatly reduced. Elastic constants are determined by measuring the velocities at which three types of plane wave travel in known directions. The most convenient method was found in measuirng the time taken for the onset of an ultrasonic pulse of longitudinal waves to travel across the diameters of a disc, each disc cut so that its circular face lay in the plane in which variations in the elastic modulus were to be measured.

In the present report, copies of which may be obtained from the Association, 21 College Hill, London, EC4, price 3s. 6d. each, Mr. Lee effects a comparison between values of Young's modulus derived from wave velocities and theoretical values based on the assumption that wood possesses rhombic symmetry. Differences in velocity distribution in the end grain section (radial tangential plane) between hardwood and softwood species of timber are discussed in relation to wood structure.

THE BUILDER CURRENT PRICES

THE information given on these pages has been specially compiled for *The Builder* and is copyright. It is the intention that the details given should indicate fair average prices of materials, not necessarily the highest or the lowest. The prices apply to large quantities of materials loaded at works, delivered at London Stations or at site in London Area as stated. Prices for smaller quantities ex merchant's warehouse will necessarily be higher so as to include the stocking and handling costs involved. It is recommended that the prices of materials should be confirmed by inquiry from suppliers and merchants.

AGGREGATES AND SAND

Delivered site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

		£	s.	d.
Pit Ballast	per yd.	1	5	5
Pit Sand	,,	1	3	8
Washed Sand	,,	1	6	9
¾ in. Shingle	,,	1	4	3
¾ in. Broken Brick	,,	1	0	9
Pan Breeze	,,	1	5	0
Fine or Coarse Foamed Slag Aggregate	per ton	3	8	0

2 yds. of fine and 2.6 yds. of coarse per ton.

CEMENT, etc.

Including non-returnable jute sacks or paper bags.

Best British Portland Cement. Standard Specification delivered Charing Cross area.

		£	s.	d.
8-ton loads and upwards, site	per ton	5	16	0
Below 8 tons down to 4 tons, site	,,	6	8	0
Below 4 tons down to 2 tons, site	,,	6	12	0
Below 2 tons down to 1 ton, site	,,	6	14	0
Rapid-Hardening Cement in 8-ton loads and upwards to site	,,	6	6	6
Below 8 tons down to 4 tons, site	,,	6	18	6
Below 4 tons down to 2 tons, site	,,	7	2	6
Below 2 tons down to 1 ton, site	,,	7	4	0

Aquacrete Water Repellent Cement. 32s. 6d. per ton on ordinary cement prices.

Sulphate Resisting Cement. 32s. 6d. per ton on ordinary cement prices.

Red, Buff or Khaki Colocrete in 8-ton lots	,,	8	16	0

Other colours according to colour.

In 4-ton lots from 313s. 3d. to 783s. 3d. per ton.

White Portland Cement	,,	14	0	9
Under 1 ton	per cwt.		17	0
417 Cement (Ultra Rapid Hardening) in 8-ton lots and upwards	per ton	7	8	6

Super Cement (Waterproof), 32s. 6d. per ton above Portland Cement.

Cullamix Tyrolean Finish, £11 13s.3d. to £14 8s.3d. (1-ton loads and upwards).

Ciment Fondu and Lightning Brands High Aluminous cement, 6-ton lots and up	,,	15	14	6
Stourbridge Fireclay, 6-ton loads at Railway Depot, London	,,	6	19	0
Stourbridge Fireclay, 6-ton loads (London sites)	,,	7	12	0
Moler Mortar Powder for Flue Bricks (London sites)	per cwt.	1	6	0

BRICKS

Full Loads		£	s.	d.
First Hard Stocks	per 1,000	16	19	6
Second Hard Stocks	,,	14	18	6
Mild Stocks (Kiln Burnt)	,,	11	5	0
Mild Stocks	,,	11	0	0

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.

2½ in. Nominal Fletton Bricks to sites in W.C. district :

Commons	,,	6	12	0
Cellular Commons	,,	6	12	0
Keyed do.	,,	6	14	0
Rustics	,,	8	12	0
Cellular Rustics	,,	8	12	0
Single Bullnose Commons	,,	8	14	6
Sandfaced	,,	9	12	0
Tuscans	,,	10	7	0
Saxons	,,	10	15	0
Golden Buffs	,,	11	2	0
Dapple Light Facings	,,	11	9	6
Heather Facings	,,	11	5	0
Best Blue Pressed Staffs (London sites)	,,	33	4	9
do. Bullnose (London sites)	,,	34	3	9
Blue Wire Cuts (London sites)	,,	29	9	6
Midhurst Lime Bricks (London sites)	,,	11	13	0
Uxbridge Whites (London sites)	,,	12	3	6
Special Purpose Sandlime Bricks (London sites)	,,	9	2	0
Best Stourbridge Fire Bricks :				
2½ in. (London stations)	,,	32	14	0
2½ in. (London sites)	,,	33	2	9
3 in. (London stations)	per 1,000	39	4	6
3 in. (London sites)	,,	39	15	0
2⅞ in. Moler Flue Bricks (London sites)	,,	31	0	0
2⅞ in. Machine-made Sandfaced Red Facings (London sites)	,,	18	19	0
2⅞ in. Machine-made Multi Red Facings (London sites)	,,	19	4	0
2⅞ in. Hand-made Sandfaced Red Facings (London sites)	,,	20	17	6
2⅞ in. Hand-made Sandfaced Multi-Colour Facings (London sites)	,,	20	17	6
Hand-made Sandfaced Cherry Red Facings, Berkshire district (London sites)	,,	21	5	0
Hand-made Sandfaced Multi-Colour Facings, Berkshire district (London sites)	,,	21	5	0
Rubber Bricks for gauged arches (London sites)	,,	52	5	0
2⅞ in. Surrey Clamp Burnt Multi Stock Facings (London sites)	,,	16	15	0
2⅞ in. Surrey Kiln Burnt Multi Stock Facings (London sites)	,,	18	7	6
Glazed Bricks (London sites), White, Ivory, Brown:				
Stretchers	,,	64	0	0
Headers	,,	63	0	0
Quoins, Bullnose and 4½ in. Flats	,,	80	0	0
Double Stretchers	,,	85	0	0
Double Headers	,,	77	10	0
One side and two ends	,,	87	0	0
Two sides and one end	,,	89	10	0
Splays and Squints	,,	83	0	0

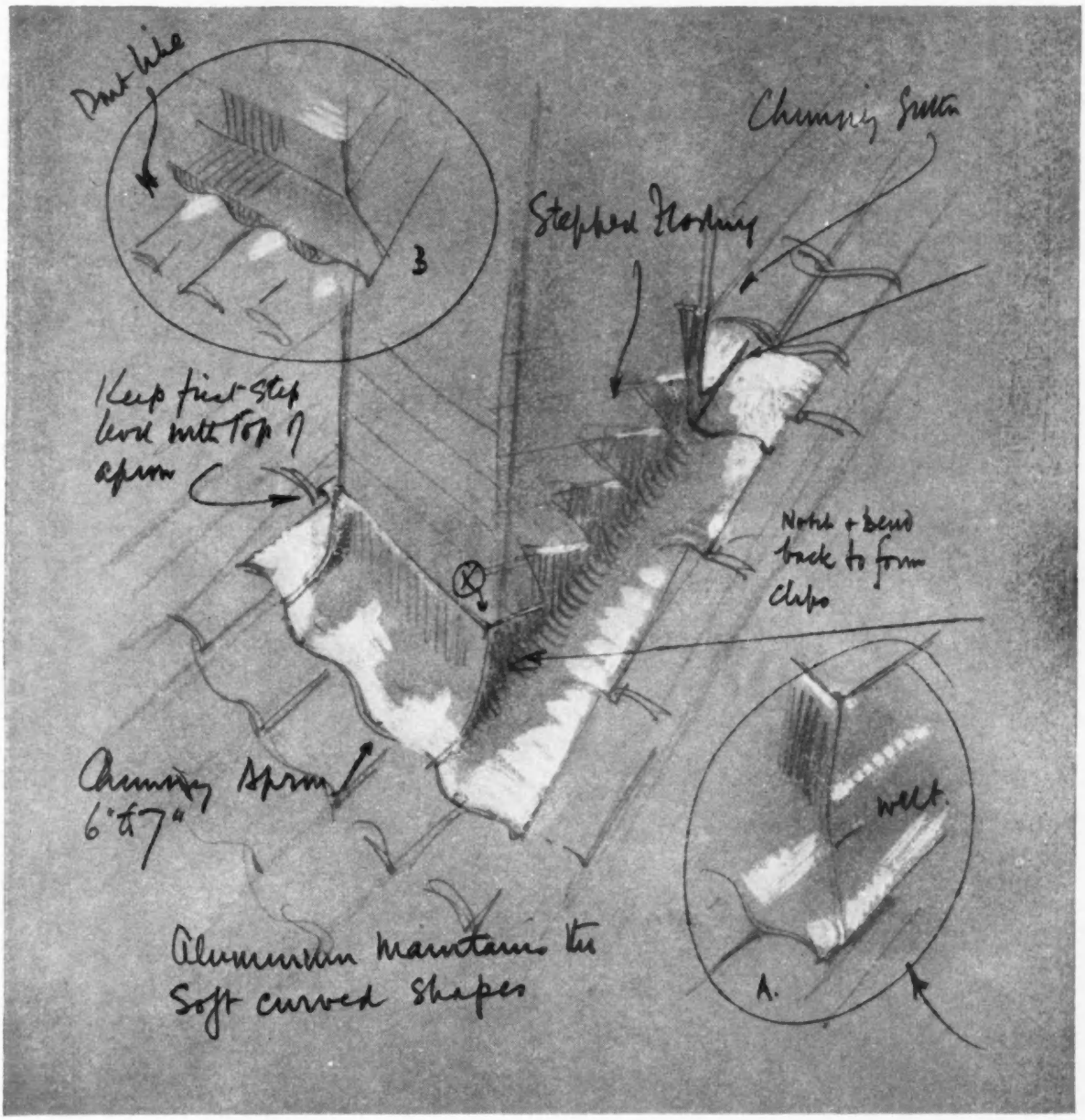
Cream and Buff, £3 extra over White. Other colours, hard glaze, £8 10s. 0d. extra over White. All above prices plus 47½% for Best quality and plus 47½% less 10% for Second quality.

PARTITION SLABS, etc.

Delivered Central London Area. (W.C. District).

		£	s.	d.
HOLLOW CLAY PARTITION BLOCKS (Keyed)				
Minimum lorry loads				
*2½ in. 140 yds.	per yd. sup.		4	7
BUILDING BLOCKS (Keyed)				
*3 in. (6 cavity) 110 yds.	,,		5	9
*4 in. (6 cavity) 90 yds.	,,		7	3
6 in. (8¾ in. × 5¾ in.) 1,250 blocks	per 1,000	28	9	0
* Half blocks at no extra charge.				
CLINKER CONCRETE				
2 in. 100 yds.	per yd. sup.		4	0
2½ in. 85 yds.	,,		4	7
3 in. 75 yds.	,,		5	8
4 in. 55 yds.	,,		7	0
CRANHAM TERRA COTTA				
2 in.	,,		7	5
2½ in.	,,		8	4
3 in. Load bearing quality	,,		9	6
4 in. do. do	,,		11	6
MOLER PARTITION BLOCKS				
2 in. 150 yds.	,,		12	9
2½ in. 120 yds.	,,		13	9
3 in. 100 yds.	,,		14	9
4 in. 90 yds.	,,		17	0
LIGHTWEIGHT CONCRETE BUILDING AND PARTITION BLOCKS OF VARIOUS SOURCES OF MANUFACTURE				
2 in. 100 yds.	per yd. sup.		5	4
2½ in. 80 yds.	,,		6	5
3 in. 65 yds.	,,		7	5
4 in. 50 yds.	,,		9	4
4½ in. 44 yds.	,,		10	2
6 in. 33 yds.	,,		14	5
THERMALITE-YTONG PARTITION BLOCKS				
2½ in. 144 yds.	,,		7	0
THERMALITE-YTONG LOAD-BEARING INSULATING BLOCKS				
3 in. 120 yds.	per yd. sup.		8	5
4 in. 90 yds.	,,		11	0
5 in. 72 yds.	,,		13	9
6 in. 60 yds.	,,		16	6
8½ in. 42 yds.	,,	1	3	8
FLOOR BLOCKS AND FILLER TILES				
Floor Blocks 12 in. × 12 in. delivered in full lorry-loads :				
3 in.	per 1,000	35	14	0
4 in.	,,	38	9	0
5 in.	,,	46	1	0
6 in.	,,	52	12	0
7 in.	,,	64	12	0
8 in.	,,	75	9	0
9 in.	,,	83	2	0
10 in.	,,	92	0	0
Filler Tiles in multiples of 10 tiles per 1,000 multiples :				
12 in. × 3 in. × ⅝ in.	,,	43	13	0
12 in. × 4 in. × ⅝ in.	,,	75	7	0
10 in. × 5 in. × ⅝ in.	,,	75	7	0

THIS IS ALUMINIUM



Architect's drawing of flashing with notes

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CP 97

STONEWARE DRAIN PIPES, etc.

Glazed Stoneware Standard List (November, 1956).

		4 in.	6 in.	9 in.
Pipes, 2 ft. lengths	per ft.	1/8	2/6	4/6
Bends	each	5/–	7/6	20/3
Junctions	,,	8/4	12/6	27/–
Gullies with 4 in. outlets	,,	12/6	13/9	22/6

The following are the percentages to be added to the Standard List (November, 1956) prices delivered London Area.
Delivered ex Merchants Wharf or Depot.

	Over 2 tons	Over 100 pieces Under 2 tons	Under 100 pieces Under 2 tons
Best Quality ...	NET	+ 22½ %	+ 27½ %
BSS Best Quality...	+ 10 % NET	+ 10 % + 22½ %	+ 10 % + 27½ %
Tested Quality ...	+ 37½ % NET	+ 37½ % + 22½ %	+ 37½ % + 27½ %
BSS Tested Quality	+ 47½ % NET	+ 47½ % + 22½ %	+ 47½ % + 27½ %

		£	s.	d.
3 in. Land Drain Pipes (in 12 in. lengths)	per 1,000	12	10	6
4 in. do. do.	,,	16	16	0
6 in. do. do.	,,	34	10	0
9 in. do. do.	,,	64	19	0

DAMP COURSE

		£	s.	d.
Hessian base bitumen 7 lb. per yd. sup. in 24 ft. rolls cut to wall widths in lots of £6 value and over delivered London area	per yd. sup.		3	5
Asbestos base do. 7 lb. per yd. sup. do. do.	,,		5	2
Lead lined bitumen do. 9½ lb. per yd. sup. do. do.	,,		12	2
18 in. × 9 in. British damp course slates	per 1,000	43	8	11
14 in. × 9 in. do. do.	,,	32	8	2
9 in. × 9 in. do. do.	,,	18	18	9
18 in. × 4½ in. do. do.	,,	19	19	9
14 in. × 4½ in. do. do.	,,	15	18	3
9 in. × 4½ in. do. do.	,,	10	14	3

STONE

		£	s.	d.
Bath Stone				
Monks Park	per ft. cube		10	3
St. Aldhelm Box Ground	,,		11	6
Delivered in railway trucks at South Lambeth B.R. Western Region.				
Doulting Stone Random Blocks. Delivered London area	,,		10	10
Beer Stone. Delivered London area	,,		10	6
Portland Stone—				
Brown Whitbed in random blocks, 20 ft. average delivered in railway trucks at Nine Elms, B.R. Southern Region	,,		9	10
Yorkshire Stone—Blue Robin Hood Quality. Delivered to site London in 6-ton lots.				
9 in. × 3 in. Rubbed, weathered, throated and stolled cills	per ft. cube	4	5	10
12 in. × 6 in. do. do. do.	,,	3	1	2
12 in. × 3 in. Plain coping, twice throated	,,	2	7	6
12 in × 3 in. Weathered and twice throated coping	,,	3	3	3
14 in. × 6 in. do. do. do.	,,	2	17	0
4½ in. × 9 in. Plinth rubbed on top and face ...	,,	2	11	0
3 in. sawn two sides Slabs, random sizes	per ft. sup.		9	1
Templates and Cover Stones, 3 in., 4 in. and 6 in. thick, edges coped for rendered brickwork ...	per ft. cube	1	11	3
do. do. fair one edge for fair faced brickwork	,,	1	17	0
Hard York—				
12 in. × 2 in. Square Steps, rubbed on top and edge	per ft. run		11	0
14 in. × 3 in. Round-nosed Steps, rubbed on top and front	per ft. cube	2	18	3
12 in. × 6 in. Plain Steps, rubbed top and front	,,	2	11	0
2 in. Rubbed and Jointed Paving, given sizes ...	per ft. sup.		10	3
2 in. Sawn Paving, edges squared, in random sizes	per yd. sup.	3	12	0

TILES AND PANTILES

Delivered London area by road in 6 tons or over per 1,000.

	£	s.	d.
Machine-made Pantiles and French pattern Tiles from Lincolnshire district	35	16	6
Hand-made Pantiles Berkshire district	64	10	0
Hand-made Double Roman Bridgwater district	78	2	9
Hand-made 10½ × 6½ tiles Berkshire district	18	0	0
Machine-made 10½ × 6½ Staffordshire district	17	0	0
Hand-made Hip and Valley tiles per doz.	1	13	0
Machine-made Hip and Valley tiles do.	1	12	0
Concrete tiles 10½ × 6½	8	10	0
do. Interlocking (49S)	19	16	6

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES

First-quality Slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate station. Per 1,000 actual.

	£	s.	d.
24 × 12	160	4	0
22 × 12	126	15	0
22 × 11	114	15	0
20 × 12	107	5	0
20 × 10	105	0	0
18 × 10	71	5	0
18 × 9	62	14	0
16 × 10	54	15	0
16 × 8	42	18	0

NOTE.—Breakage in transit, purchasers' responsibility.

TIMBER

			£	s.	d.
Softwood					
Joinery quality	Ex Wharf	per standard	£115 to £140		
Carcassing quality	do.	,,	£94 — £98		
1 in. Tongued and Grooved Flooring	do.	,,	£112	0	0
Hardwood					
Mahogany—African S.E.	do.	per ft. cube	1	10	0
do. Honduras S.E.	do.	,,	3	5	0
Oak European S.E.	do.	,,	2	10	0
do. Japanese S.E.	do.	,,	3	0	0
do. English Logs sawn ...	do.	,,	2	0	0
Teak 8 in. average S.E. ...	do.	,,	3	17	6
Walnut African Logs sawn ...	do.	,,	1	2	6
Plywood		per			
6 mm. (¼ in.) Birch Plywood B/BB		100 sq. ft.	4	4	3
6 mm. Israeli Gaboon do. B/BB exterior grade WBP (AX100)		,,	4	5	3
18 mm. Birch Blockboard		,,	9	8	0
¾ in. Douglas Fir Plywood 96 in. × 48 in. Exterior grade WPB (AX100) solid two sides		,,	9	3	0

DOORS (in Lots I-II)

Delivered London area.

		£	s.	d.
1½ in. 4 Horizontal Panel. Pattern 4 in. deal				
2 ft. 0 in. × 6 ft. 6 in.	each	1	16	0
2 ft. 3 in. × 6 ft. 6 in.	,,	1	17	6
2 ft. 6 in. × 6 ft. 6 in.	,,	1	18	6
2 ft. 9 in. × 6 ft. 6 in.	,,	2	0	6
2 in. do. but top panel open. Pattern 4 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	9	0
2 ft. 9 in. × 6 ft. 6 in.	,,	2	11	6
2 in. 2 Panel top panel open. Pattern 2 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	3	0
2 ft. 9 in. × 6 ft. 6 in.	,,	2	5	0
1½ in. Plywood Faced Flush Doors to BS459, Part 2A				
2 ft. 0 in. × 6 ft. 0 in.	,,	1	12	3
2 ft. 0 in. × 6 ft. 6 in.	,,	1	12	3
2 ft. 3 in. × 6 ft. 6 in.	,,	1	13	9
2 ft. 6 in. × 6 ft. 6 in.	,,	1	15	3
2 ft. 9 in. × 6 ft. 6 in.	,,	1	18	0
1½ in. Hardboard Faced Flush Doors				
2 ft. 0 in. × 6 ft. 0 in.	,,	1	5	6
2 ft. 0 in. × 6 ft. 6 in.	,,	1	6	0
2 ft. 3 in. × 6 ft. 6 in.	,,	1	6	6
2 ft. 6 in. × 6 ft. 6 in.	,,	1	8	6
2 ft. 9 in. × 6 ft. 6 in.	,,	1	9	6

SUNDRIES

Delivered London area.

		£	s.	d.
1 in. Wood Wool Slabs 6 ft. 0 in. × 2 ft. 0 in. in quantities of 1 ton (67 yds. to 1 ton)	per yd.		6	2
1½ in. do. (67 yds. to 1 ton)	,,		8	0
2 in. do. (52 yds. to 1 ton)	,,		9	9½
2½ in. do. (45 yds. to 1 ton)	,,		11	3
3 in. do. (39 yds. to 1 ton)	,,		12	7½
Quantities under 1 ton add 1d. per ½ in. of thickness				
½ in. imported or home produced insulation Board, quantities over 5,000 sq. ft.	per 100 sq. ft.	2	2	6
⅛ in. Hardboard do.	,,	1	17	6
5/16 in. do. do.	,,	2	4	6
2 in. Compressed Straw Slabs, roofing quality. 6 ft., 8 ft., 9 ft., 10 ft., and 12 ft. × 4 ft.				
50–100 yds.	per yd. sup.		11	4
101–250 yds.	,,		10	10
251–750 yds.	,,		10	1
Over 750 yds.	,,		9	4
2 in. do. for partitions 4d. per yd. cheaper.				
5/16 in. Asbestos Flat Building Sheets...	,,		4	3½
¼ in. do. do. do.	,,		6	0
Roofing Felt 1-ply	,,		1	9
do. 2-ply	,,		2	2½
Best Scotch Glue in slabs	per ½ cwt.	5	3	9
do. pearl	,,	5	3	9
Croid Glue	28 lb.	2	6	0
Impact Adhesive	per gall.	2	12	0
Cut Nails 3 in. (1-ton lots)	per ton	84	10	0
do. 4 in. and up (1-ton lots)	,,	81	0	0
Wire Nails 3 in. (4-cwt. lots)	per cwt.	3	19	2
do. 4 in. and up (4-cwt. lots)	,,	3	16	6

METALS

STEEL JOIST, ETC.

		£	s.	d.
Basis Joists— 6 in. × 5 in., 8 in. × 5 in., 8 in. × 6 in., 10 in. × 6 in., 12 in. × 6 in., plain cut to lengths delivered London area	per ton	47	15	0
Extra for sizes				
3 in. × 1½ in. 4 in. × 1¾ in.	,,	3	10	0
3 in. × 3 in.	,,	2	10	0
4 in. × 3 in.	,,	2	5	0
10 in. × 4½ in.	,,	1	10	0
5 in. × 2½ in. 5 in. × 3 in.	,,	1	15	0
4¾ in. × 1¾ in.	,,	3	5	0
5 in. × 4½ in. 7 in. × 3½ in. 13 in. × 5 in. ...	,,		15	0
6 in. × 3 in. 24 in. × 7½ in.	,,	2	0	0
6 in. × 4½ in. 7 in. × 4 in. 8 in. × 4 in. }	,,	1	5	0
9 in. × 4 in. 10 in. × 5 in. ... ... }				
12 in. × 5 in. 22 in. × 7 in.	,,	1	0	0

METALS—*continued*

				£ s. d.
9 in. × 7 in.	10 in. × 8 in.	12 in. × 8 in.	per ton	10 0
14 in. × 5½ in.	14 in. × 6 in.	14 in. × 8 in.	per ton	10 0
15 in. × 5 in.	15 in. × 6 in.	16 in. × 6 in.	per ton	10 0
16 in. × 8 in.	18 in. × 6 in.	18 in. × 7 in.	per ton	10 0
18 in. × 8 in.	20 in. × 6½ in.	20 in. × 7½ in.	per ton	10 0
Steel angles average price			,,	48 15 0
Steel tees average price			,,	49 15 0
Fabricated work delivered London—				
R.S. Joists cut and fitted			,,	67 19 0
Compound girders			,,	72 14 3
Stanchions			,,	78 9 9
Compound stanchions			,,	83 4 3
In Roof Work—Trusses and Purlins			,,	93 19 6
Average prices not for awkward work.				
Angle cleats and ⅝ in., ¾ in. and ⅞ in. bolts average price London area			per cwt.	5 10 0
Above prices joists etc. increased by 1·1%.				

Ferro-Concrete Bars and Fabric

Mild Steel Ferro-Concrete Bars British manufacture to BSS 785 ex. Mills. 1 in. diameter and upwards delivered nearest London station ...	per ton	40 10 0
do. do. ex. London Stock do. delivered London site	,,	49 10 0
Extras—		
¼ in. diam.	per ton extra	8 12 6
5/16 in. do.	,,	6 12 6
⅜ in. do.	,,	4 12 6
⅝ in. do.	,,	3 2 6
¾ in. do.	,,	1 10 0
⅞ in. and ⅞ in. diam.	,,	15 0
Above prices mild steel bars increased by 1·1%.		
Steel wire mesh reinforcing fabric to BSS 1221A.		
Ref. No. 106 ... ... 7.88 lbs.	per sq. yd.	5 2¾
,, ,, 109 ... ... 4.71 ,, ...	,,	3 0¾
,, ,, 113 ... ... 1.83 ,, ...	,,	1 8½
,, ,, 122 ... ... 7.32 ,, ...	,,	4 10½
,, ,, 125 ... ... 4.32 ,, ...	,,	2 10½

Mild Steel Tubes

Tubes to BSS 1387. Fittings BSS 1740.

Basic List Prices

		¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Tubes	per ft.	9¾	10	1/–	1/2½	1/9	2/3	2/8	3/9
Bends	each	1/7	1/9	2/–	2/6	3/8	5/5	6/2	10/7
Elbows, square	,,	1/8	1/10	2/2	2/6	3/–	4/4	5/2	8/6
do. round	,,	1/10	2/–	2/4	2/10	3/4	4/8	5/8	9/4
Tees	,,	2/–	2/2	2/6	3/2	3/8	5/–	6/2	10/2
Crosses	,,	4/4	4/8	5/6	6/6	8/2	11/–	13/2	21/–
Sockets, Plain	,,	6	6	8	10	1/–	1/4	1/9	2/6
do. Diminished	,,	8	10	1/–	1/2	1/6	2/–	2/8	4/–
Backnuts ...	,,	4	4	6	7	10	1/–	1/4	2/2

Malleable Fittings

		¼ in.	⅜ in.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Elbows, round	each	8½	8½	9½	1/2½	1/8½	2/7½	3/6	5/–
Tees	,,	9½	9½	1/–	1/4¾	2/–	2/9½	4/–	5/6
Crosses	,,	1/2½	1/2½	1/4¾	2/–	2/9½	3/7½	5/2½	7/2½
Sockets	,,	5¾	5¾	7	9½	1/–	1/7½	2/2½	3/1½
Backnuts ...	,,	3	3	3½	4¼	5¾	7¾	10½	1/5¼

Discounts from List prices as follows :—

Galvanised Tube—	Under 1 ton	Over 1 ton	W.I. Fittings		Malleable Fittings
Light	−36¾%	−38½%	Light	−24½%	Malleable List
Medium	−32¾%	−34½%	Heavy	−20½%	−14%+40%
Heavy	−25 %	−26¾%			
Black—					
Light	−47 %	−48¾%	Light	−30½%	Malleable List
Medium	−43 %	−44¾%	Heavy	−26¾%	−14%
Heavy	−35¾%	−37 %			

C.I. Half-Round Gutters

Delivered London per yd. in 6 ft. lengths.

	Gutters	Nozzles	Stop Ends
3 in.	4/4½	3/10	1/1
3½ in.	4/9	4/2	1/1
4 in.	6/1½	4/9	1/8
4½ in.	6/9	5/4	2/–
5 in.	7/6	5/9	2/4

C.I.O.G. Gutters

Per yd. in 6 ft. lengths :	Gutters	Nozzles	Stop Ends
3 in.	5/7½	5/1	1/4
3½ in.	6/3½	5/1	1/8
4 in.	6/11½	5/4	2/–
4½ in.	7/6	6/1	2/4
5 in.	8/2½	7/–	2/8

C.I. Rain-Water Pipes

	Pipes	Bends	Branches
2 in.	9/4	4/9	6/10
2½ in.	9/4	5/4	9/2
3 in.	10/6	6/8	9/11
3½ in.	11/10	7/10	11/11
4 in.	13/9½	9/6	14/2

L.C.C. Coated Soil Pipes

2 in.	10/7	8/2	9/11
2½ in.	11/2	9/1	12/4
3 in.	12/6½	9/11	14/8
3½ in.	14/–½	12/4	17/1
4 in.	15/11½	13/10	20/3

Above prices for gutters, rain-water and soil pipes for under 5-cwt. lots only. Lots over 5 cwt. see List No. 3300, dated February 1, 1955, plus 32½% and tonnage allowance. 4-ton lots 5%, 2-ton lots 2½%.

L.C.C. Coated Drain Pipes

		£ s. d.
4 in. diameter in 9 ft. lengths	per yd. run	1 11 1
6 in. do. do.	,,	2 5 6
4 in. diameter bends	each	1 0 6
6 in. do. do.	,,	2 14 9
4 in. diameter branches	,,	1 16 6
6 in. do. do.	,,	4 7 6
Above prices for any quantity but under 5 cwt. carriage extra.		

Pitch Fibre Drain Pipes

2 in. diameter in 5 ft., 5 ft. 6 in. or 8 ft. lengths including couplings	per ft. run	1 6½
3 in. do.	,,	1 10¾
4 in. do.	,,	2 6
5 in. do.	,,	4 1¾
6 in. do.	,,	5 0¾
4 in. diameter short radius ⅛ bends	each	17 9
4 in. do. do. ⅛ bends	,,	12 11
2 in. diameter 6 ft. radius bends (5 ft. lengths)	,,	17 0
3 in. do. do. do.	,,	19 8
4 in. do. do. do.	,,	1 7 4
5 in. do. do. do.	,,	2 4 0
6 in. do. do. do.	,,	2 14 6
Above prices for loads of £60 and over. Loads £25 to £59 19s. 11d. Plus 10% Loads under £25 ... Plus 15%		

Asbestos Rain-Water Pipes and Fittings

All less 17½% discount.		2 in.	2½ in.	3 in.	4 in.
Pipes, 6 ft. lengths ...	per yd.	4/7	4/10½	5/11	7/10
Shoes	each	3/–	3/3	3/10	5/2
Single Branches	,,	4/8	5/6	6/7	9/2
Bends, squares or obtuse ...	,,	3/3	3/7	4/8	6/7
Swan Necks, 4½ in. proj. ...	,,	3/7	4/8	5/2	7/3
do. 6 in. do. ...	,,	3/10	5/2	5/10	7/10

Asbestos O.G. Gutters and Fittings

		4 in.	4½ in.	5 in.	6 in.
Gutters, 6 ft. lengths	per yd.	4/4	4/9½	5/9	6/10½
Drop ends	each	3/6	4/–	4/9	5/5
Stop ends	,,	1/1	1/2	1/3	1/5
Angles	,,	3/7	4/1	5/–	5/10
Nozzles	,,	3/6	4/–	4/9	5/–
Union Clips	,,	1/9	2/1	2/6	2/11

Asbestos Half-Round Gutters and Fittings

	per	3 in.	4 in.	4½ in.	5 in.	6 in.
Gutters, 6 ft. lengths	yd.	3/0½	3/7½	3/8½	4/4½	6/1
Drop ends	each	2/6	3/–	3/3	3/7	5/2
Stop ends	,,	1/–	1/1	1/2	1/3	1/5
Angles	,,	2/10	3/3	3/7	3/10	5/2
Nozzles	,,	2/6	3/–	3/3	3/7	5/2
Union Clips	,,	1/3	1/4	1/5	1/7	2/5

	Per ton basis in London £ s. d.
Iron—Staffordshire Crown Merchant Quality	52 17 6
Mild Steel Bars	47 18 0
Mild Steel Hoops	49 10 0

	Ex Merchant's Stock per ton Two-ton lots £ s. d.
Soft Sheets C.R. and C.A.—	
20 gauge	63 0 0
24 gauge	65 10 6
26 gauge	68 11 0
Galvanised Corrugated Sheets, 6-ft. to 9-ft.—	
20 gauge	70 18 0
24 gauge	74 9 0
26 gauge	79 15 0
Galvanised Flat Sheets C.R. and C.A.—	
20 gauge	72 8 6
24 gauge	75 19 0
26 gauge	81 5 0

ALUMINIUM AND ALUMINIUM ALLOYS

(Base Prices)		£ s. d.
Sheet BS 1740 S1C 18 SWG (36 in. wide)	per lb.	3 0½
Sheet BS 1470 NS3 Utility 18 SWG (36 in. wide)	,,	2 11½
Coiled strip BS 1470 S1C 18 SWG (24 in. wide)	,,	2 11½
Coiled strip BS 1470 NS3 Utility 18 SWG (24 in. wide)	,,	2 11
Coiled strip high purity, 22 SWG (12 in. wide)	,,	3 2
Corrugated sheet BS 1470 NS3 Circular Profile 8 ft. × 32 in. × 20 SWG	per sheet	1 14 1
Corrugated sheet BS 1470 NS3 Industrial Profile 8 ft. × 31¾ in. × 20 SWG	,,	1 19 10
Corrugated sheet BS 1470 NS3 Mansard Profile 8 ft. × 31¾ in. × 20 SWG	,,	1 13 1
Extruded section BS 1476 E1C simple moulding	per lb.	2 10½
Extruded section BS 1476 E1C 1 in. diam. round	,,	2 8
Extruded section BS 1476 HE19WP simple angle	,,	3 2
Extruded section BS 1476 HE19WP 1 in. diam. round	,,	3 1
Tubing BS 1471 T1C 1½ in. O/D × 20 SWG ...	,,	4 8
Tubing BS 1471 HT19WP 1½ in. O/D × 20 SWG	,,	6 3

PLUMBERS' BRASS WORK, etc.

Delivered in London area.

All per dozen	B.S.S. ½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdown bib cocks Crutch head for iron	87/–	128/–	—	—	—	—
Toilet bib cocks for iron ...	109/–	158/5	—	—	—	—

HIGHER SECURITY AT LOW COST

WITH THE YALE 3-LEVER RANGE

Higher security . . . at lower-than-ever cost! That's what you get with the Yale range of 3-lever mortice locks . . . a truly *complete* range to cover every possible requirement for a mortice lock.

WIDE RANGE OF DIFFERS

- 144 Differs off levers only (standard)
- 350 Differs off levers (if required)
- 3,500 differs (with wards)

General Specification

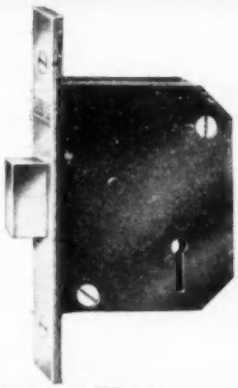
Follower holes brass bushed; Forend — armoured brass upper and steel lower; Deadlock bolts reinforced with hardened steel pins; Case: steel, enamelled grey. Bolt heads: brass. Can be master keyed in suites and sub-suites.

Styled for today

The complete range of Yale 3-lever mortice locks, together with the key, have been accepted by the Council of Industrial Design for the 'Design Index'.

Literature

Your local merchant will be pleased to show you this new range of locks, and let you have a fully illustrated booklet.

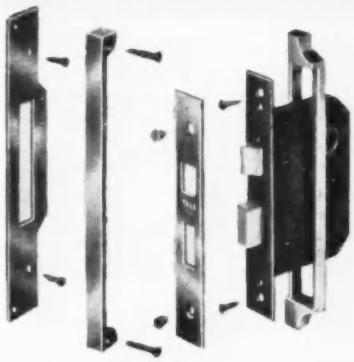


Wide range of Types

The wide range of Yale 3-lever locks includes Upright Mortice Deadlocks 2½" & 3", Horizontal Mortice Locks 5" & 6", Upright Mortice Locks 2½" & 3", and a Sliding Door locking latch.

Nylon Covered Key

The light, attractively styled key is nickel plated. Nylon-covered shank gives durability—self-lubrication at point of contact with lock.



The Yale Reversible Rebated Forend Set

This set enables Yale 3-lever Mortice Locks and all other standard Yale plain forend mortice locks to be converted into fully rebated locks. The set is completely reversible for left or right hand, inward or outward opening doors.

Where there's a door there's a need for

YALE
REGISTERED TRADE MARK

THE **YALE & TOWNE** MANUFACTURING COMPANY · BRITISH LOCK AND HARDWARE DIVISION · DEPT C8 · WILLENHALL · STAFFS

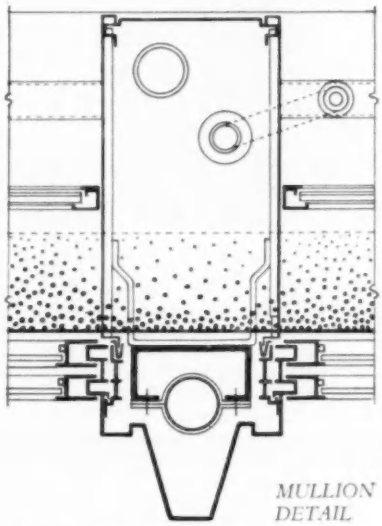
A new development in curtain walling

HOPE'S

WINDOW WALLS in the SANDERSON BUILDING

Berners Street, London, W1

are complete window walls, finished inside and out with concealed rainwater, heating and sprinkler pipes, ducting and convectors



MULLION DETAIL

Send for List 383

HOPE'S WINDOWS
The Name Guarantees

HENRY HOPE & SONS LTD
SMETHWICK, BIRMINGHAM
LONDON: 17 BERNERS ST., W.1

PLUMBERS' BRASS WORK, etc.—*continued*

All per dozen	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdownstopcocksforiron	66/–	95/9	188/–	363/–	522/6	917/6
do. withtwo unionsforlead	89/–	132/–	234/4	472/–	623/6	1,389/6
Double nut boiler screws ...	18/8	26/5	47/6	48/6	67/–	93/6
Heavy Croydon ball valves	77/–	193/6	312/5	568/8	734/10	—
Plumbers' union brass lead to iron	19/6	23/6	38/6	52/10	70/6	165/–
	1½ in.	1¾ in.	2 in.	3 in.	3½ in.	4 in.
Caps and Screws	33/–	40/8	59/6	92/5	118/10	155/3
Brass Sleeves	—	31/11	31/11	56/2	74/10	91/5
	1¼ × 6 lb.	1½ × 6 lb.		2 × 7 lb.		3 × 7 lb.
Lead P. trap with brass cleaning screws	68/6	85/6		137/–		233/9
Lead S. trap do. do.	82/9	102/9		168/3		302/3

Solder :

			s. d.
Plumbers' ...	1 cwt. lots	320/–	14 lb. lots per lb. 3 7
Tinmen's	,, ,,	404/–	,, ,, ,, 4 5
Blow pipe ...	,, ,,	407/–	,, ,, ,, 4 6

COPPER TUBES AND SHEETS

Copper tubes BSS 659/1944 on the basic price of 27¾d per lb. plus gauge and manufacturing extras as follows. Minimum quantities, 10 cwt.

	Extra d.		d.		d.
⅛ in. × 19 gauge	16¼	Total per lb.	43⅝	Approx. per ft.	11¾
¼ in. × 19 ,,	14⅝	,, ,,	41⅝	,, ,,	16¼
1 in. × 18 ,,	12⅞	,, ,,	40½	,, ,,	25
1¼ in. × 18 ,,	12¼	,, ,,	39½	,, ,,	30
1½ in. × 18 ,,	12¼	,, ,,	39½	,, ,,	36
2 in. × 17 ,,	13⅞	,, ,,	41¼	,, ,,	57¾

Small Quantity extras :

10 cwts. to 5 cwts.	plus ½d. per lb.
5 cwts. to 2 cwts.	,, 1d. ,,
2 cwts. to 1 cwt.	,, 2d. ,,

Rolled Copper sheets up to 48 in. wide, basic price plus gauge and manufacturing extras ... ... £ 267 s. 0 d. 0

ZINC

		£	s.	d.
Sheet Zinc, 10 gauge (25 SWG), 5 cwt. lots upwards	per cwt.	8	6	6
,, ,, 12 gauge (23 SWG), ,, ,, ,,	,,	8	4	0
,, ,, 14 gauge (21 SWG), ,, ,, ,,	,,	8	2	9

BRASS TUBE

Brass tubes, basic price, plus gauge and manufacturing extras ... ... per lb. 1 9⅞

LEAD SHEET AND PIPES

Basis selling price to one address in London or Home Counties :

		£	s	d.
Lead Sheet, English, 3½ lb. substance and upwards	per ton	104	15	0
,, Water Pipe, in coils	,,	107	0	0
Lead Soil Pipe, 10 ft. or over 2 in. to 4 in. in dia.	,,	108	10	0
,, ,, ,, over 4 in. dia.	,,	110	10	0
,, Gas or Untinned Compo pipe...	,,	108	10	0

5 cwt. lots and over less 6d. per cwt. off basic prices.

Extras over Basis for quantities under 5 cwt. :

3 cwt. and under 5 cwt.	per cwt.	4	0
1 cwt. do. 3 cwt.	,,	6	0

Smaller quantities than 1 cwt. priced specially.

Supplying sheet lead and lead pipes to less than basis weights and cutting to sizes less than basis charged extra according to current trade schedule.

Allowance for Old Lead, collected, £53 0s. 0d. per ton weighed at buyer's works.

PLASTER, etc.

		£	s.	d.
Coarse Pink in 1-ton loads and over delivered on site	per ton	8	11	3
do. White do. do. do.	,,	9	0	9
Sirapite Coarse BSS 1191 Class C do.	,,	9	2	9
do. Fine do. do. do.	,,	9	10	6
do. Browning BSS 1191 Class B do.	,,	9	2	9
do. Board Finish do. do.	,,	9	2	9
Blue Lias Lime, in 6-ton loads	,,	6	17	6
Hydrated Lime (Grey) in 6-ton loads	,,	5	10	0
do. (White) do.	,,	6	0	0
Lump Lime (Grey) do.	,,	5	7	0
do. (White) do.	,,	5	14	6
White Keen's or Parian Cement, in 1-ton loads ...	,,	12	7	6
Pink Keen's or Parian Cement, in 1-ton loads ...	,,	12	2	3
Granite Chips, in 6-ton loads	,,	2	6	9
Hair	per cwt.	4	17	6
Gypsum Plaster Lath or Base Board, ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	per yd.		2	2½
1,200 yds.	,,		2	1½
do. Insulating do. ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	,,		2	8
1,200 yds.	,,		2	7
Gypsum Plaster Wall Boards, 3 and 4 ft. wide 6 to 12 ft., ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	,,		2	5½
1,200 yds.	,,		2	4½
do. Insulating do. ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	,,		2	11
1,200 yds.	,,		2	10

PAINTS AND DISTEMPER

Delivered London area.

		£	s.	d.
Ceiling Distemper	per cwt.	1	7	6
Washable Distemper	,,	5	15	0
Gloss Paint	per gal.	2	16	0
Super Snowcem cement paint (in 1 cwt. drums) ...	per cwt.	5	0	0

LEAD PRODUCTS AND OILS

		£	s.	d.
Ground White Lead, in 1 cwt. kegs	per cwt.	8	7	6
Genuine White Lead Paint, 1-19 gal. lots in 1 gal. tins	per gal.	3	6	6
Genuine Red Lead, Dry, 1 cwt. keg (10 ton lots)	per cwt.	5	12	6
do. do. do. (1 cwt. lots)	,,	6	19	0
Genuine Linseed Oil Putty, 1 cwt. keg	,,	2	13	6
Size XD quality 28 lb.	per tin		9	0
Raw Linseed Oil (5 gal.) drums extra	per gal.		16	9
Boiled Linseed Oil (5 gal.) do.	,,		17	8

SUNDRIES

Turpentine substitute (5 gal.) drums extra ...	,,	5	4½
do. do. (40 gal.) do.	,,	4	8½
Solignum, Brown (5 gal. cans) Exterior	,,	10	0
Creosote (40 gal. barrels)	,,	2	3
Paste Powder (1 lb. packets)	per lb.	2	4
White Lining Paper	per piece	1	4

VARNISHES, etc.

Delivered London area.

		£	s.	d.
Oak Varnish, Outside or Inside	per gal.	2	0	0
Oak, Pale Copal do. do.	,,	2	0	0
Hard Drying Oak for Inside	,,	2	5	0
Crystal Paper Varnish do.	,,	2	8	0
Eggshell Flat Varnish do.	,,	2	2	0
Finest Carriage Varnish	,,	2	7	0
Front Door Varnish	,,	2	4	0
Japan Gold Size	,,	1	12	0
Black Japan	,,	1	16	0
Brunswick Black	,,	1	12	0
Berlin Black	,,	1	10	0
Terebene	,,	1	12	0
Knotting (1 gal. bottles free)	,,	1	15	0
French and Brush Polish (do.)...	,,	1	15	0

GLASS

Delivered London area.

		s.	d.
18 oz. Sheet Glass Ordinary Glazing Quality— Cut Sizes...	per ft. sup.		10
24 oz. do. do. do. do.	,,	1	0½
26 oz. do. do. do. do.	,,	1	3
32 oz. do. do. do. do.	,,	1	7½
⅛ in. Rolled Plate	,,	1	3¾
3/16 in. Rolled and Rough Cast...	,,	1	6¾
¼ in. do. do.	,,	1	7¾
⅛ in. Figured Rolled and Cathedral, Standard patterns—			
White Group 1	,,	1	3¾
do. Group 2	,,	1	9¾
do. Standard Tints	,,	2	1½
do. Special Tints	,,	7	3
⅛ in. Pinstripe, Hammerstripe, Reeded, Reedlyte and Luminating Group 3	,,	1	8½
¼ in. Wired Cast up to 50 in.	,,	1	10¾
¼ in. do. do. 50 in. to 72 in.	,,	2	2¾
¼ in. Georgian Wired Cast	,,	1	11

Hollow Glass Blocks—

P.B.2	Cross reeded	5¾ × 5¾ × 3⅞ in.	each	3 9
P.B.3	Broad reeded	7¾ × 7¾ × 3⅞ in.	,,	5 9
P.B.32	Cross reeded	7¾ × 7¾ × 3⅞ in.	,,	5 9
P.B.4	Prismatic	7¾ × 7¾ × 3⅞ in.	,,	6 6
P.B.5	Flemish	7¾ × 7¾ × 3⅞ in.	,,	5 9
P.B.6	Boomerang	7¾ × 7¾ × 3⅞ in.	,,	6 6

Half Size Blocks—

P.B.32	Cross reeded	7¾ × 3¾ × 3⅞ in.	,,	4 10

Radiused Corner Blocks to match up with—

P.B.2	Cross reeded	,,	8	1
P.B.3	Broad reeded	,,	9	8
P.B.32	Cross reeded	,,	9	8

P.B.2, P.B.3, P.B.32 are also supplied in Light Diffusing Blocks at same price.

¼ in. Polished Plate Glass, G.G. quality—

In plates not exceeding 2 ft. sup.	per ft. sup.	4	7
,, ,, ,, 5 ft. sup.	,,	5	7
,, ,, ,, 45 ft. sup.	,,	7	6
,, ,, ,, 100 ft. sup.	,,	7	6

¼ in. Polished Plate, extra sizes, i.e., plates exceeding 100 ft. sup. or 160 in. one way or 96 in. both ways. G.G. quality—Not exceeding 135 ft. sup. or 240 in. one way or 130 in. both ways ... | ,, | 11 | 4
Not exceeding 180 ft. sup. or do. ... ... | ,, | 15 | 0

Plates exceeding 180 ft. sup. prices on application.

Substances other than ¼ in. Polished Plate at Special Prices.

Quantity Tariff—Sheet and Sundry Glass.

The following prices apply to minimum quantities of one size and one pattern delivered by the manufacturer to one site at one time.

Description of Glass—	Minimum quantity	per ft. sup. s.	d.
18 oz. sheet O.Q.	3,000		7½
24 oz. ,, ,, ...	2,000		9½
26 oz. ,, ,, ...	2,000		11½
32 oz. ,, ,, ...	2,000	1	3½
⅛ in. Rolled Plate...	1,000		10¾
⅛ in. Figured Rolled and Cathedral Standard Patterns, White Group 1	1,000		10¾
do. Group 2	1,000	1	2¾
⅛ in. Pinstripe, Hammerstripe, Reeded, Luminating and Spotlyte Group 3	1,000	1	2¾
3/16 in. Rolled Plate or Rough Cast	2,000	1	2
¼ in. do. do.	2,000	1	2¾
¼ in. Wired Cast, Hexagonal up to 50 in. ...	2,000	1	5
¼ in. do. do. do 50 in. to 72 in. ...	2,000	1	9
¼ in. Georgian Wired Cast	2,000	1	5½

THE BUILDER RATES OF WAGES

AS FROM FEBRUARY 6th., 1961. (Every endeavour is made to ensure accuracy but we cannot be responsible for errors)

1. Craftsmen and Labourers.

Region	Craftsmen	Labourers
	s. d.	s. d.
England & Wales (Grade A) ...	5 0	4 4½
London	5 1½	4 6
Liverpool and District ...	5 1½	4 6
Scotland... ...	5 0	4 4½

2. Apprentices.

Age	Per cent. of Craft Rate	London and Liverpool Dist.	England, Wales
		s. d.	s. d.
15	25	1 3½	1 3
16	33½	1 8½	1 8
17	50	2 6½	2 6
18	62½	3 2½	3 1½
19	75	3 10½	3 9
20	87½	4 6	4 4½

3. Young Male Labourers.

Age	Per cent. of Craft Rate	London and Liverpool Dist.	England, Wales and Scotland
		s. d.	s. d.
15	33½	1 6	1 5½
16	45	2 0½	1 11¾
17	66⅔	3 0	2 11
18	100	4 6	4 4½

NORTHERN IRELAND is not included; rates fluctuate so much from district to district that reference should be made to local offices.
WATCHMEN.—The rates per shift for watchmen engaged on building sites is 27s. 6d. in London and Liverpool District, and 26s. 3d. in the provinces.
FEMALE OPERATIVES.—In all districts throughout the country except in Scotland the rate of wages for women, aged 19 and over, engaged in craft processes is 4s. 1½d. per hour. Women engaged on work other than craft processes, 3s. 9½d. per hour. In Scotland the rate for the woman craftsman is 4s. 4½d. after a probationary period, and the woman labourer, 3s. 10½d.

Urban Renewal in Europe

Problems Discussed at United Nations Symposium

MAIN FEATURES of urban renewal policies and programmes; principal criteria for conservation, rehabilitation and redevelopment; organisation of and procedures for drawing up and implementing urban renewal schemes; economics of urban renewal; and conservation and rehabilitation practices were the problems discussed during the symposium organised under the auspices of the United Nations Economic Commission for Europe's housing committee at Geneva from June 5 to 7. More than fifty experts in building and town planning from sixteen European countries (both east and west) and the United States took part. Most of the delegations included local officials responsible for the planning and execution of urban renewal schemes. Discussion centred on a series of synthesis reports prepared by the rapporteurs based on information supplied for this purpose by governments, and a report by the secretariat which inter alia put forward as a basis for discussion some general conclusions concerning government policies in urban renewal.

The participants underlined the usefulness of the meeting which, it was considered, had constituted an important and useful step in international co-operation in the field of urban renewal. It was recommended that the housing committee should keep under review various aspects of urban renewal and promote the exchange of information and experience between countries.

Suggestions for Follow-up

Four suggestions for follow-up work were put forward to the ECE housing committee: (1) An analysis of the underlying over-all economics of urban renewal, the first objective of which would be to show in quantitative terms the cost of clearance, whether of houses or of other structures, compared with the values created by redevelopment, including social values which are difficult to quantify. Other case studies might deal on a similar 'cost/benefit' basis with conservation and rehabilitation. A further stage of these studies might be an economic analysis of urban renewal as a tool for the development of towns within the framework of regional and national development plans or programmes. (2) An exchange of information and experience on selected aspects of urban renewal, in the first instance through exchange of documentation, and possibly by inquiries carried out by rapporteurs. (3) The possibility of considering such questions as the principles of building and reconstructing of towns, central areas and traffic questions, in co-operation with the international bodies working in these fields. (4) That bilateral and multilateral exchanges of visits of experts in the fields of urban renewal should be promoted on a systematic and regular basis.

The symposium elected as chairman Mr. Howard J. Wharton who is the assistant commissioner of the Urban Renewal Administration of the USA. Mr. Viabcheslav Chkvarikov, director of the Institution of Town Building in Moscow, was elected vice-chairman. Mr. Georg Gunthert, an architect attached to the Ministry of Housing of the Federal Republic of Germany, acted as general rapporteur as he was one of the first to put forward the idea.

New Companies

THE FOLLOWING NEW COMPANIES registered in England have been announced by Jordan and Sons Ltd., company registration agents.

E. STONE (CHELTENHAM) LTD.—Regd. June 29, 1961. 1a Glencairn Park-rd., Cheltenham. Secy.: Rosalie G. Stone. Bldrs., etc. Nom. cap.: £100.

HOOKHILLS CONSTRUCTION CO. LTD.—Regd. June 29, 1961. 19 Bolton-st., Brixham, Devon. Secy.: A. Plews. Nom. cap.: £4,000.

DAVIES BUILDERS (BRISTOL) LTD.—Regd. June 30, 1961. Secy.: C. G. E. Wheeler. Nom. cap.: £5,000. Dir.: Frederick W. Clark, 40c Branksome Wood-rd., Bournemouth.

GORDON'S HOMES LTD.—Regd. June 30, 1961. Bldrs., etc. Nom. cap.: £100. Dir.: Gordon J. Gibson, Normans Hall Farm, Pott Shrigley, Macclesfield.

FIRTH & LONGLEY LTD.—Regd. July 3, 1961. 50 Albion-st., Morley, Yorks. Secy.: J. S. Braime. Plbrs., bldrs., contrs. and decrs., etc. Nom. cap.: £1,000.

D.F.S. (BUILDERS) LTD.—Regd. July 3, 1961. 1 Jewry-st., Winchester. Secy.: Rachel O. French. Nom. cap.: £100.

BRIAN TICKNER & CO. LTD.—Regd. July 3, 1961. Imperial-bldgs., Horley, Surrey. Secy.: C. Brewer-Barclay. Bldrs., etc. Nom. cap.: £500.

G. & J. ALLEN LTD.—Regd. July 3, 1961. 23 Hillgrove-ave., Yeovil. Secy.: D. Allen. Bldrs. and contrs., etc. Nom. cap.: £2,000.

P. D. BRITTON & CO. LTD.—Regd. July 3, 1961. 27 Southend-rd., Wickford. Secy.: P. D. Britton. Bldrs., etc. Nom. cap.: £500.

SWIFT BUILDING CO. LTD.—Regd. July 3, 1961. 161 Cambridge-st., Aylesbury, Bucks. Secy.: Wilfred I. D'Costa. Nom. cap.: £5,000.

F. A. STEADMAN & SON (ROMFORD) LTD.—Regd. July 4, 1961. 39-40 County-chbrs., Weston-rd., Southend-on-Sea. Secy.: Elsie B. Steadman. Bldrs., etc. Nom. cap.: £1,000.

H. C. FAY & SON LTD.—Regd. July 4, 1961. 71 London-rd., Widley, Portsmouth. Secy.: Ada N. Fay. Bldrs., etc. Nom. cap.: £1,000.

R. NEWMAN (BUILDERS) LTD.—Regd. July 4, 1961. 6 Surrey-st., WC2. Secy.: Stanley H. Lucas. Nom. cap.: £100.

J. R. ALLYSON LTD.—Regd. July 6, 1961. 185 Tuckton-rd., Southbourne, Bournemouth. Secy.: Denis M. Elliott. Bldrs., etc. Nom. cap.: £1,000.

NEWLANDS SECTIONAL BUILDINGS LTD.—Regd. July 6, 1961. Nom. cap.: £3,000. Sub.: Charles E. Holmes, 44 Sutherland-ave., Hull (clk).

Industrial Fluorescent Fittings

TO SUPPLEMENT existing British Standards the Electric Light Fittings Association has published a quality specification for industrial fluorescent fittings. Copies, price 1s. 6d., may be obtained from the Association at 89 Kingsway, London, WC2.

THE SOFONO CONVECTOR MK 11

Materials, Finish: Cast-iron. Refractory lined firebox. Vitreous enamelled fire. Choice of 6 colours. Single-cased construction.

Non-boiler Model: Radiation/convection for 2,250 cu. ft.; radiation only for 1,750 cu. ft. *plus* background heating for 2,000 cu. ft. *Boiler Model:* Radiation/convection for 2,000 cu. ft.; radiation only for 1,500 cu. ft. *plus* background heating for 1,200 cu. ft. Above figures are for traditional insulation standards. Higher space heating outputs where Egerton insulation standards apply. Hot water from 25/30 gallon cylinder. Alternatively serves 45 sq. ft. of radiators. Adjustable throat restrictor incorporated.

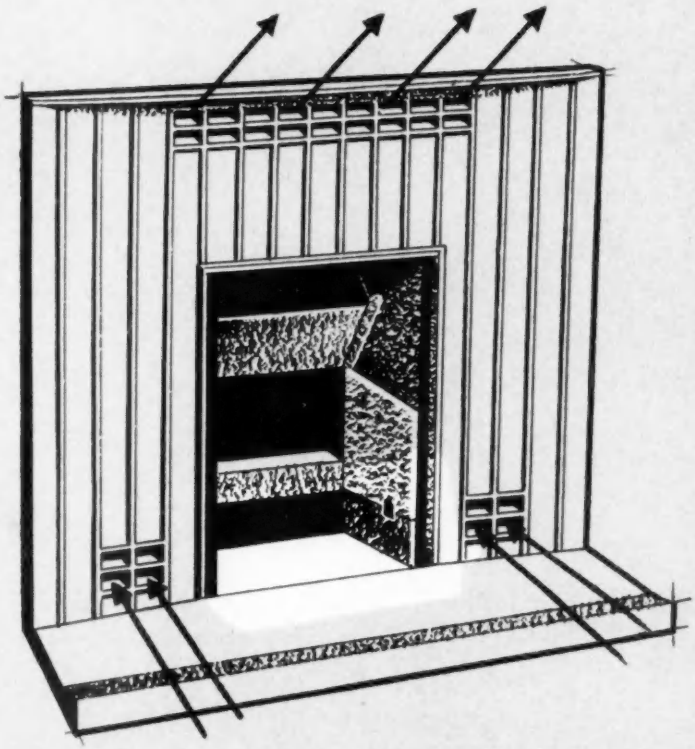
Fire: Approved with range of Sofono 16" Inset open fires. Luminous flame gas ignition burner available. Cast-iron or wrot-welded steel boilers have hand holes and can be supplied bower-barffed, copper boiler also available. Drilled, tapped, 1" B.S.P. one side. Reversible for left- or right-hand connection. *Combustion Control:* Adjustable ashpit door to fire.

Installation: Brick opening 22½" wide × 13½" deep × 33¼" high, hearth to underside of concrete lintel. Sheet steel liner available for brick opening.

Total Heat to Room of Installation. Can be installed behind fireplace surround with inlet and outlet grilles incorporated, or with Sofono modern self-convecting interior frame. Alternatively, it can be installed behind Sofono 'Contemporary' self-convecting cast-iron enamelled surround.

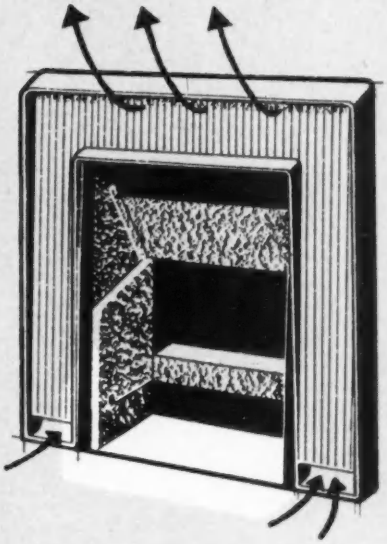
Multi-Room Heating: When air is ducted to room behind or above, inlet MUST come from neutral source, and outlet grilles MUST be closeable.

Tools, Accessories: Ashpan and tool for combustion control, lifting ashpan, operating boiler damper and throat restrictor. Approved by the Domestic Appliances Council on behalf of the Ministry of Power.



THE SOFONO SELF-CONVECTING INTERIOR FRAME

Specially designed for use with the CONVECTOR MK. II, this vitreous enamelled cast-iron self-convecting interior frame with a reeded surface pattern incorporates unobtrusive inlet and outlet grilles. Available in 6 colours.



VARIOUS FIRES WHICH CAN BE FITTED TO THE ABOVE APPLIANCES

FULL-VIEW GRANGE LOW-VIEW RURAL MK11

Please write to the Technical Director for information on all Sofono appliances.

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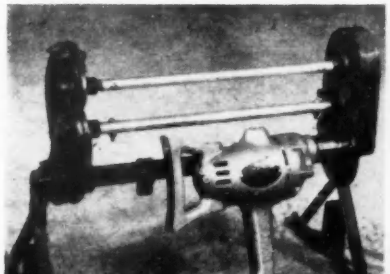
TECHNICAL REVIEW

This Review of plant, equipment and materials—in most cases new or with new features—is intended to give brief details only of the products mentioned. Notices are based on data supplied by the manufacturers. Additional information and prices can be obtained either direct or by using the prepaid Readers' Service form which appears on page 146 of this issue. The form can be used for more than one inquiry.

1. Cutting

In New Zealand a machine has recently been developed for cutting CORRUGATED SHEET METAL. The cut can be made across, diagonally or lengthways without distortion. The tool is easy to operate, is light and portable and can either be used in the workshop or carried to the job. Normally hand-driven by a handle, the machine can be switched to power within 30 seconds by merely sliding off the handle and clamping on a ½ in. power drill. Two self-oiling steel gear



The 'Cuttermile' can be switched to power in 30 seconds by sliding off the handle and clamping on a ½ in. power drill

wheels turn self-sharpening cutters whilst a telescopic throat extends the unit to five feet allowing the easy cutting of sheet up to 10 ft. wide. There is no limit to length cutting.

L. J. Fisher & Co., Ltd.,
Jellicoe-rd., Panmure, Auckland, E2, New Zealand.

2. Miscellaneous

A recent addition to a range of liquid level gauges is a SIGHT GAUGE designed specifically for central heating fuel tanks. This new model is fitted with a special spring loaded pull button valve which only allows liquid into the gauge when manually operated on a reading being taken, and completely shuts off the contents of the tank from the sight tube when not in use. The pull button mechanism reduces the possibility of jamming in the open position. The valve itself, fitted with double 'O' rings for efficient sealing, is buried deep in the gauge mounting body and well behind the gauge collars. This protects it from external interference or damage and ensures that there will be no leakage from the tank should the gauge receive a blow.

The sight tube is made of a clear unbreakable plastic material and is provided with a special plastic strip giving very effective optical magnification of liquid level. An additional useful feature is that the gauge can be removed for cleaning and inspection while the tank remains full and in service.

Seetru Ltd.,
43 Corn-street, Bristol 1.

3. Site Office

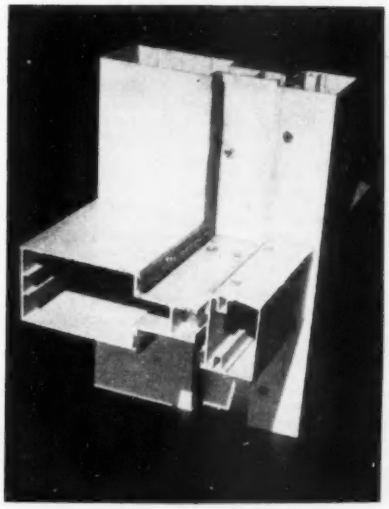
A new PORTABLE OFFICE, to provide staff with adequate and well-equipped accommodation, is constructed as a single unit with telescopic legs on which it is raised and lowered by jack. It can be taken off a lorry by one man in fifteen minutes. The unit makes the fullest use of available space as one can be placed on top of another to make a three-storey block or can be put into a new building project to be lifted by crane from floor to floor as erection progresses. The office has adjustable louvred windows and may be fitted with electricity and telephone with adaptors for immediate connection. The doors are split on a stable design with the top half opening in line with large windows giving light and spacious appearance. The overall construction is based on resin bonded plywood.

Portasilo Ltd.,
Blue Bridge-lane, York.

4. Windows

An interesting feature of the new Courts of Justice in Manchester is the installation of special ALUMINIUM WINDOWS. The windows are made up of hollow box extrusions forming the

The intersection between vertical and horizontal members



internal strength members with external box-form capping members. Nylon brushes insulate the capping member from the internal strength member, thereby considerably reducing heat loss from the building during cold weather. The complete assembly forms a mullion 2½ in. wide on the face by 7½ in. deep. The transom members are of similar dimensions. The capping sections serve to hold the infillings, ventilators and glass in position. They are sealed externally by pvc gaskets with the addition of a Thiokol pointing.

The infilling panels are of marble varying from ¼ in. to 1½ in. thick which are given additional support by gusseted brackets fixed to the floor slabs of the building. The windows have been given a lustre finish and afterwards anodised.

Williams & Williams Ltd.,
Reliance Works, Chester.

5. Technical Publications

(a) A compendium containing approximately 150 miniature ceramic tiles has been produced for architects, designers and builders, by RICHARD TILES LTD. The compendium is divided into six folios of which each one enables the user to study an entire range of ceramic tiles. The folios conform to the standard A4 size and are bound in different colour plastic covers to specify the various ranges. The tiles themselves are protected by removable translucent sheet giving easy access. Further information from the company at Tunstall, Stoke-on-Trent, Staffs.

(b) The latest supplementary page to the manual, 'Pitch Fibre Pipes: Information and Data Sheets,' has been published by the PITCH FIBRE PIPE ASSOCIATION. It deals with 'Further Tests on Pitch Fibre Drain and Sewer Pipes,' namely those carried out on the flexibility of pipes and pipelines, resistance to abrasion and resistance to detergents. These supplement the British Standard tests already detailed in the manual. Copies are being sent to all known holders of the PFPA Manual, which is obtainable from the Secretary of the Association, 27 Chancery-lane, London, WC2.

(c) JAMES LATHAM LTD., Leeside Wharf, London, E5, have issued their July brochure and price list for their range of joinery mouldings which are being manufactured in 10 different hardwoods. Anthony Moyes, ARIBA, has designed a series of patterns which should prove interesting to those fitting out new homes and to those modernising old property. The brochure also gives details about the company's 'Lathamclad' timber boarding, offered in six patterns and 21 different woods.

(d) The second booklet in a series dealing with dry construction has been published by STRAMIT BOARDS LTD., under the title 'Dry Construction and Industrial Buildings.' This small publication is filled with interesting information, which is well illustrated. The foreword is by the Chief Architect to the LCC, Mr. Hubert Bennett. Copies are available from the company at Cowley Peachey, Uxbridge, Middx.

News In Brief

Direct Labour, Hammersmith

HAMMERSMITH BC, which has recently completed eight housing schemes by direct labour, has been informed by the Borough Treasurer of a saving of £17,923 over the amount of £345,232 as certified by the quantity surveyors. The actual cost of the 163 dwellings and one sub-station was £327,309, as shown in the final accounts.

Building Societies' New Chairman

IN CONSEQUENCE of the death of Mr. J. R. Millican, the council of the Building Societies Association, at its meeting on July 14, elected Mr. C. John Dunham, FRICS, president of the Co-operative Permanent Building Society, to succeed him as chairman of the Association.

A Cup for Welding

FOR THE SECOND YEAR in succession a welder from Whitlock Bros., Ltd., Great Yeldham, Essex, Geoffrey D. Cowle has carried home the Bowman Challenge Cup for Electric Welding in a competition open to welders in any part of Great Britain, and which recently took place at the Royal Show at Cambridge.

The Late Mr. R. J. N. Taylor

THE DEATH OCCURRED at his Leatherhead home on July 7 of Mr. Reginald J. N. Taylor, vice-chairman of Braithwaite & Co. Engineers Ltd. As joint managing director of the company during the last war he was concerned with the building of Baily bridges and the Mulberry Harbour project. He was in his 74th year.

Control of Cranes on Roads

THE MINISTRY OF TRANSPORT has told the Association of Municipal Corporations that it is 'pressing ahead as quick as it can' with work on proposals for further measures of control on the movement of mobile cranes and other vehicles carrying long loads which project and are likely to cause damage to other road users.

Liverpool City Centre Development

LIVERPOOL CITY CORPORATION COMMITTEES affected have now all approved in principle the scheme submitted by Mr. Charles Clore, the London financier, for the redevelopment of 21 acres of the city centre at an approximate cost of £30,000,000. The scheme embraces flats, an hotel, bus station, multi-storey departmental stores and shops, offices and a civic centre.

Timber Engineering Conference

THE FIRST international conference on timber engineering is to be held at Southampton University from September 18 to 23. Further details from the conference secretary, Dr. H. G. Allen, at the Department of Civil Engineering, Southampton University. The conference fee, which includes accommodation and meals is £21. It should be noted that the final date for the return of application forms is August 1.

Car-Ports for Council Houses

CWMBRAN, MON., urban council are to build council houses with garages attached. They are thought to be one of the first councils in the country to do this. Some of the houses planned might have American style car-ports instead of garages. The car-ports are open at each end and will be cheaper to build.

Builders Win at Golf

THE GOLF MATCH between the Metropolitan Borough Engineers Golfing Society and the London Master Builders Association Golfing Society, played at Hendon Golf Club on July 7, ended in a resounding win for the builders. The final results were: engineers, two and a half matches, builders, seven and a half matches.

Company News

BLAW KNOX LTD. recommend the payment of a final dividend of 10 per cent on the ordinary shares of the company for the year ended December 31, 1960.

The directors of THE MARLEY TILE (HOLDING) CO. LTD. have announced the declaration of an interim dividend of 7 per cent (less tax) on the ordinary share capital of the company in respect of the year ending October 31, 1961, payable on July 31 next.

THE ASSOCIATED PORTLAND CEMENT MANUFACTURERS LTD. recommend the payment of a final dividend of 8½ per cent (less tax) on the ordinary shares of the company for the year ended December 31, 1960.

H. C. JANES LTD. recommend the payment of a final dividend of 25 per cent (less tax) on the shares of the company for the year ended March 31, 1961 (1960 equals 30 per cent).

BAMBERGERS LTD. have announced that the name of their subsidiary manufacturing pallets, stillages and packing cases in timber and plywood, formerly Lee Cases Ltd., has been changed to Bambergers Pallets & Cases Ltd.

F. HILLS & SONS LTD. recommend the payment of a final dividend of 7½ per cent for the year ended March 31, 1961.

At a board meeting of TAYLOR WOODROW LTD., building and civil engineering contractors, in London on July 4, an interim dividend was declared of 4½d. per share (less tax) on the 11,250,000 ordinary shares of 5s. each in issue, payable on August 18, 1961.

Personal Column

MR. JOHN H. PAYN has been appointed publicity officer for the Braithwaite Group of Companies, bridge and constructional engineers, with head offices at Great Bookham, Surrey.

Following three years as company secretary and chief accountant of Robert Marriott Ltd., MR. AIDAN L. F. FULLER, FCA, has now been appointed to the board.

MR. JOHN C. GRIST has been appointed commercial manager of the construction equipment division of Blaw Knox Ltd., Rochester, Kent.

The George Cohen 600 Group Ltd. announce that MR. JOHN P. BOLTON has been appointed managing director of its Australian subsidiary, George Cohen Sons & Co. (Australia) Pty. Ltd., of Sydney. He succeeds the late Mr. C. A. Bell.

MR. GORDON P. SLINGO, ARIBA, has been appointed chief architect to Medway Buildings and Supplies Ltd., Rochester, Kent.

MR. J. F. CRITTALL was appointed chairman and managing director of the Crittall Manufacturing Co. Ltd. following the death of his uncle, Lord Braintree, in May.

Trade News

Change of Address

HIGGS & HILL LTD., building and civil engineering contractors, have changed their Midland area office address to Birmingham-rd., Allesley, Coventry.

Price Reduction

THE RETAIL PRICE of the Morphy-Richards 'Astral' 4 cu. ft. 'Commodore' refrigerator has been reduced from £54 19s. 6d. to £47 5s., bringing it into line with their recently introduced 3.5 cu. ft. 'Table Top' model.

Change of Name

AS FROM JUNE 1, the Pearl Varnish Co. Ltd., paint manufacturers of Pontypridd, Glamorgan, South Wales, have changed their name to Pearl Paints Ltd.

Prefab for Lighthouse Keepers

MIDDLESEX PREFABRICATED BUILDINGS LTD., one of the JEL Group of Companies, of Hounslow, Middlesex, have obtained an unusual £8,000 contract from Trinity House. It is for prefabricated living accommodation for the lighthouse keepers, at Cape Pembroke, in the Falkland Islands—8,000 miles away.

New Marketing Arrangements

AS FROM JUNE 1, the Valor Co. Ltd. have assumed direct contact with the factor trade for the distribution of domestic oil appliances. There has also been a reorganisation of the company's internal marketing and sales organisation and five new marketing groups have been established.

Cement in The North-East

THE BLUE CIRCLE Group has opened a new bulk supply service between the Kent Works of The Associated Portland Cement Manufacturers and Sunderland, using a converted collier to carry the cement. The aim of the new depot at Sunderland, is to boost bulk cement supplies so as to meet the increasing demand in the north-east. The round trip from Greenhithe takes 4 days and the tanker will carry a load of over 1,300 tons of bulk cement.

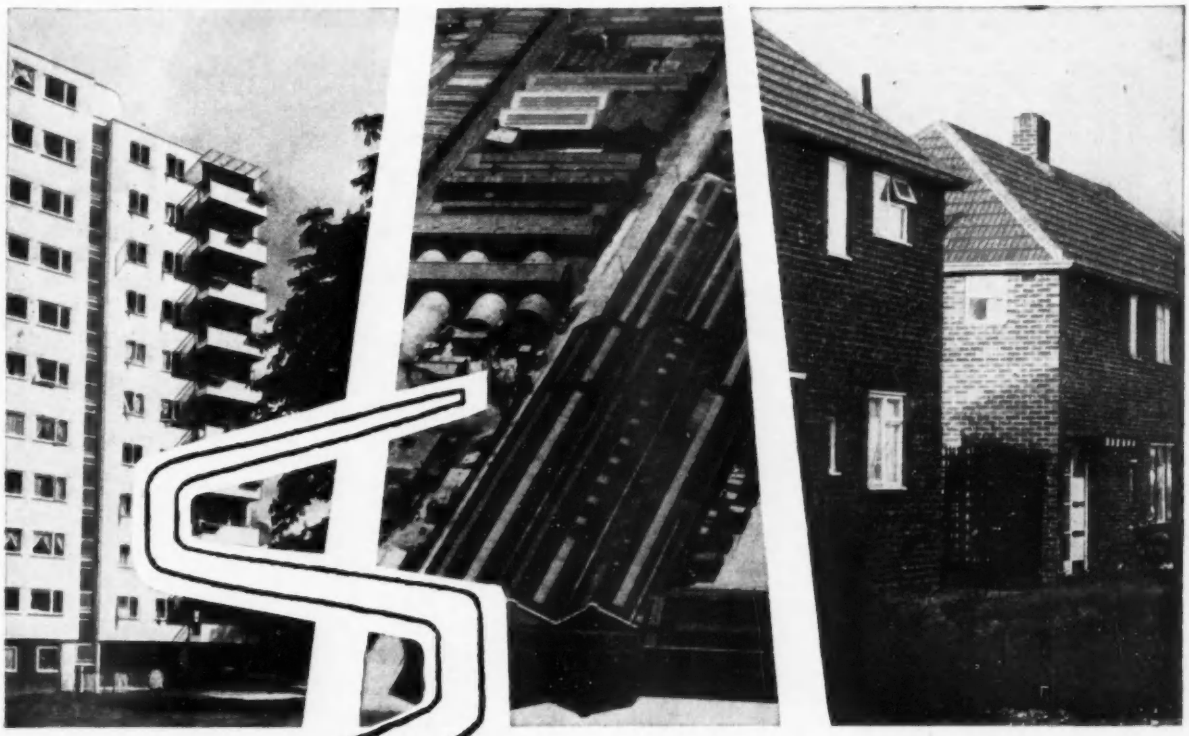
New American Trade Centre

AMERICA'S FIRST PERMANENT trade centre was opened in London by the United States Secretary of Labour, Mr. Arthur Goldberg on Monday, June 26. Situated in St. James's-st., W1, it will be used for trade, agricultural, and commercial exhibitions. The first exhibition, coinciding with the official opening, showed American domestic appliances and household equipment.

Ceilings of the 5,600 sq. ft. of show space have been specially reinforced with steel to support the heavy light fittings and exhibition equipment.

The centre was designed by the regional office for foreign buildings of the United States Embassy and alterations were carried out by Walter Gladding & Co. Ltd.

All paint was supplied by a British paint firm, Keystone Paint and Varnish Co. Ltd., and used in the exhibition hall and the administrative offices.



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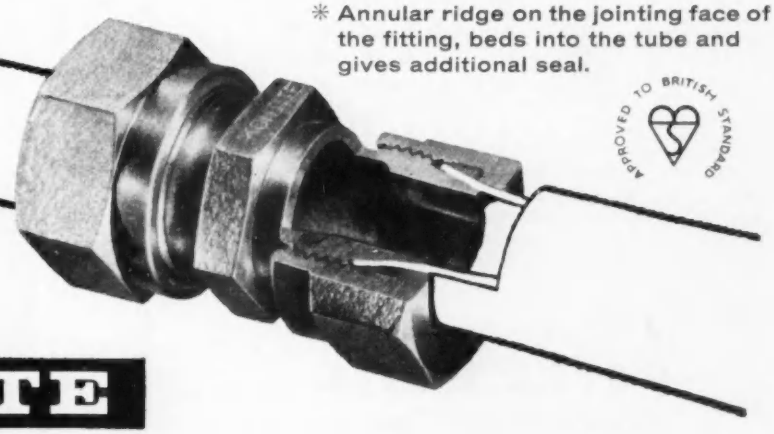

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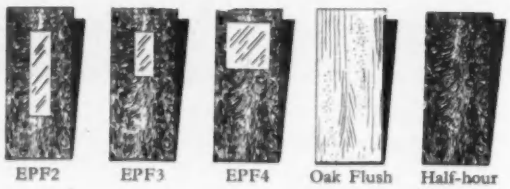

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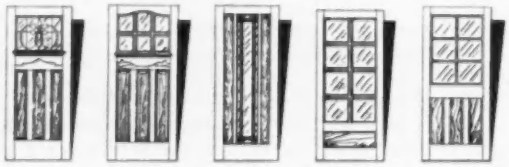

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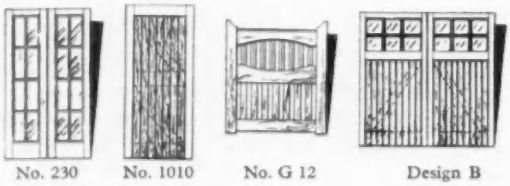

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SC73

OVERSEAS BUILDING

From Our Own Correspondents

AUSTRALIA (QUEENSLAND).—Comalco Industries is to spend £A150,000 on the construction of a village for aborigines on Cape York peninsula. The village will replace the present Presbyterian mission at Weipa, where the company is to mine and treat bauxite on a vast scale. The initial cost of the venture, which will supply aluminium for local consumption and export, will be £A125m.

AUSTRALIA (SOUTH).—Details have been announced of a paper and pulp mill to be established at a cost of £A15m. by a Canadian company. Mr. F. H. Brown, who is a director of the company, Macmillan, Bloedel and Powell River, has said it was hoped to begin construction about the end of this year. Two sites near Mount Gambier, near the border of Victoria and South Australia, were being inspected. The area is the centre of a rapidly growing softwood timber industry.

AUSTRALIA (SOUTH).—The Guardian Assurance Co. Ltd. has accepted a tender from Costain, Hansen and Yuncken (South Australia) Ltd., for the construction of a 13-storey office building in Grenfell-street, Adelaide. The project, when completed in September, 1962, will be valued at about £500,000. . . . The South Australian State Cabinet has authorised the construction of a bridge across the River Torrens at Underdale.

AUSTRALIA (WESTERN).—Western Australian Health Minister Hutchison has stated that hospital works worth £1,602,159 are expected to be started before December. Contracts worth £894,159 have been let in recent weeks and the balance will be let by December.

CANADA.—It has been announced in Ottawa, that capital expenditures on new hospital construction, throughout the country, has been estimated at $230m. for this year.

CANADA.—A subsidy of maximum $86m. will be provided for the Canadian National Railways by Government legislation authorising the building of the 440-mile Great Slave Lake Railway. Pine Point Mines Ltd., who require the rail line for the transportation of ore from Great Slave Lake to the Cominco smelter in Trail, BC, would contribute.

CANADA (BRITISH COLUMBIA).—MacMillin Bloedel and Powell, of Vancouver, have announced construction of a paper pulp mill, to cost £A15m., near Mount Gambier, South Australia. . . . Canadian Collieries Resources Ltd., plan to construct a multi-million dollar pulp mill at Union Bay, Vancouver Island.

INDIA.—Mr. Patniak, the Orissa (India) Chief Minister, has stated that the State will have 40 more airstrips linking almost all parts of the State with Bhubsneshwar. There are at present 16 airstrips in Orissa.

ISRAEL.—The Dead Sea Works at Sodom, Israel, have announced a stock issue of I£27½m. The stock, being floated this month, will provide part of the total of I£128m. needed for carrying out an expansion scheme to raise potash output. It will also pay for a new potash refinery and an electric power station; the expansion of the bromine factory to 10,000 tons a year capacity; a bromides plant in Beersheba; a salt factory of 20,000 tons annual capacity; and a factory for magnesite chamotte tiles.

ITALY.—The Pye British industrial group, producers of electronic and radio-TV appliances, is drawing up plans for a new factory at Iveringo, near Milan. Products will be exported to Common Market countries or to those of the sterling area using 365 line TV.

NYASALAND.—John Laing & Son (Rhodesia) Ltd. has been awarded a £126,700 contract by the Government of Nyasaland for the construction of a hospital, housing for Africans and Europeans, and administration buildings in the southern province.

RHODESIA AND NYASALAND.—An agreement has been concluded between Shell and Aminoil—representing the local oil interests—on the erection of a £13m. oil refinery in the Federation of Rhodesia and Nyasaland. Although no decision has yet been reached as to its location, it is thought it may be between Umtali and Salisbury. It is likely to be in commercial production in under 3 years. Mr. F. S. Owen, the Federal Minister of Commerce, stated on June 20 that, with the pipeline and a possible nitrogenous fertiliser plant, the project could involve expenditure of over £30m.

WEST GERMANY.—The Frankfurt firm of Einkaufszentrum GmbH, which is a wholly-owned subsidiary of the Toronto (Canada) company Principal Investments Ltd., was recently reported to be planning the establishment of about 20 shopping centres in Western Germany during the next few years. These centres would consist mainly of a super food market and a general department store, textile and furniture departments. Car parking facilities, restaurants, cafés, cinemas, bank branches and postal facilities and kindergartens would be provided.

WEST GERMANY.—3,900 flats for British and Canadian Servicemen's families will be built in various towns of North Rhine-Westphalia and Lower Saxony in the next few months.

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Building in Rhodesia

BUILDING PLANS passed in the Rhodesian Federation's municipal and peri-urban areas last year amounted to little more than £18¼m., the lowest figure since 1954. A statement by the Central African Statistical Office at Salisbury says that the Southern Rhodesian figure of some £13m. is the lowest in six years. Northern Rhodesia's total of nearly £4¼m. is the lowest figure recorded since Federal statistics began. Nyasaland is the only territory to show an increase. Building plans passed there last year were valued at nearly £990,000, £130,000 more than the previous year.

E. African Contracts for British Firm

MR. J. WESTACOTT, MBE, MICE, FIOB, a director of John Mowlem & Co. Ltd., has returned from a tour of Kenya, Uganda and Tanganyika where the Mowlem Construction Co. has been awarded contracts valued at £1,292,000. These include the 50-mile Greek River road in Uganda (£260,000); the 30-mile Kilosa Ifakara road in Tanganyika (£256,000); the 20-mile Kericho Awasi road in Kenya (£154,000); and a combined auto-silo and office block at Nairobi, Kenya (£410,000).

Export Assistance Register

THE INSTITUTE OF DIRECTORS on July 11 published an 'Export Assistance Register,' the first venture of its kind to be undertaken in this country. The register was compiled from answers to a questionnaire sent to the Institute's 37,000 members asking if their companies needed help to begin selling overseas or, alternatively, were able and prepared to give it. Some 600 companies, manufacturing more than 500 different main categories of goods, are listed who have offered export assistance without cost to non-competing concerns. Copies of the first edition of the register are available to interested trade associations on request to the Institute at 10 Belgrave-square, London, SW1.

Nigeria's First Paint Factory

INTERNATIONAL PAINTS are pioneering the local manufacture of paint in Nigeria. Their new factory, which is now being built at Ikeja, 14 miles NW of Lagos, adds one more link to their chain of 26 paint manufacturing plants throughout the world.

Nigerian Timber Inspection Scheme

THE NIGERIA TIMBER ASSOCIATION is reported from Lagos by Barclays Bank DCO to have made proposals for a log inspection service operated by members of the Association, which would provide at a low cost, a reputable, experienced and incorruptible system of inspection, with the issue of certificates for non-members of the Association. As at present envisaged the inspection, which would not entail measuring, would report that 'with the exception of certain logs . . . the parcel is up to a minimum export standard.'

Prefabricated Housing for N. Nigeria

THE MINISTRY OF WORKS of Northern Nigeria, acting for the Ministry of Education, has placed an order valued at £360,000 for prefabricated tropical houses manufactured by Coseley Buildings Ltd., of Wolverhampton. The houses are of new design and are the result of three years' intensive development. The houses, 109 of them, will provide accommodation for teaching staff in all parts of Northern Nigeria. They can be erected by unskilled labour, under supervision, in 2 to 3 weeks. Eight basic designs are available, providing alternative styles of 2, 3 and 4 bedroom units, as well as a style specially designed as a bachelor block. Internal arrangement can be varied to meet particular requirements and extensions can be added to provide servants' wings or other extra accommodation. The electrical installation is supplied as a ready-made unit and the packaged building includes wiring, plumbing, sanitary fittings, paint and floor finish. The buildings have an aluminium framework and specially designed composite panels which insulate more than twice as effectively as an 11 in. cavity wall. The roofs are of 'stressed skin' construction, a principle used in aircraft production which entirely eliminates the use of roof trusses.

This order represents the first major step in putting into effect the Nigerian Federal Government's 1961 White Paper on Educational Development during 1961 to 1970 in which the accepted recommendations involve total capital expenditure for the period of the order of £75m. plus an equal amount of total recurrent cost. Coseley Buildings Ltd. have already provided several complete schools for the Northern Region during the past 12 months.

Public Works in Nyasaland

THE NYASALAND GOVERNMENT spent more than £3m. during 1960 on public works, a rise of more than 20 per cent on 1959's figure of just over £2½m. Building and engineering contracts took more than a third of the total — £1.1m. — some £440,000 more than in 1959.

SCOTTISH BUILDER

Autumn Start for Dundee Scheme

A START to the £2.5m. Overgate development scheme in the centre of Dundee will be made at the beginning of September, it was announced recently by officials of Murrayfield Real Estate Company.

The scheme involves the construction of a new shopping and commercial centre, and should be completed within five years.

In order to reduce disruption in the area the construction programme has been divided into three phases. The first phase coincides with the construction by the town council of a section of the inner ring road at the western end of the site, this road having a direct link with the Tay Road Bridge. Bus lay-bys will give shoppers immediate access to the pedestrian walk which runs across the site. There is provision for 93 shops and four department stores.

General Manager to Retire

MR. WILLIAM C. KIRKWOOD, OBE, a member and the general manager of the Scottish Industrial Estates Management Corporation, is to retire in August. He will continue as managing director of the Scottish Building Centre, 425 Sauchiehall-st., Glasgow.

Cedar Bungalow Attracts 4,000

A FOUR-APARTMENT bungalow constructed of Western red cedar by the Weir Housing Corporation, of Coatbridge, which was on show at the Royal Highland Show, Ingliston, in two days attracted more than 4,000 people. Interest has been shown by persons coming from Australia, New Zealand, California, Canada, and the South of England. The bungalow has been built specially for the farming community and for erection in remote areas.

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New Buildings

BLACKBURN.—TC has approved a commercial redevelopment scheme for the centre of the town. Caledonian Property Investment Co., 29, Commercial-st., Dundee, will carry out the scheme which includes three squares with pedestrian shopping, covered access, car parking, and a separate area for public buildings. The scheme will completely renew the centre of the town. Architects are Wheeler and Sproson, of Kirkcaldy.

CAMPBELTOWN.—TC plans a £500,000 housing scheme in five-storey flats, detached and semi-detached houses. Prefabs will be demolished to make space.

EDINBURGH.—The cost of the new golf clubhouse and sports pavilion at Silverknowes, Edinburgh will be more than £38,000, it was reported recently at a meeting of the civic amenities committee of the TC.

GLASGOW.—Allan Glens sch., Glasgow, is to be rebuilt at a cost of £½m. Dean of Guild approval was given recently to the plans. The first phase involves a six-storey block in front of the existing sch., on ground now being cleared. The second phase will include demolition of the present sch. and rebuilding.

GREENOCK.—Edmund Nuttal Sons & Co. (London) Ltd. have been given a £2½m. contract for the civil engineering work in connection with the Clyde Graving Dock project. The contract now placed involves the construction of the dry dock, a repair quay and a tanker cleaning depot. The further contracts amounting to £2m, covering equipment and further developments, have not yet been placed. Work will begin on the project within a few weeks and is to be completed by 1964. Engrg. consultants are Burns-Baptie & Ptnrs., of London and Glasgow.

HAWICK.—TC are to build three blocks containing 15 three-apartment and three four-apartment houses on their Silverbuthall site. Hawick Dean of Guild Court has approved this £38,500 second stage in the council's replacement of pre-fabricated houses by permanent dwellings. The Court also approved a petition by the British Cotton and Wool Dyers' Association, Manchester, to erect a £7,000 warehouse at their branch factory at Turnbull's Ltd., Victoria-rd., Hawick.

INVERNESS.—Caledonian Builders, Ltd., Inverness, has received permission from Inverness Dean of Guild Court to build 60 private houses costing £200,000 at Lochardil on the outskirts of Inverness. The approval is subject to planning permission being obtained and local by-laws being complied with. An application by another local firm, Fraser and McDonald, Ltd., to build 12 flats at a cost of £30,000 near Daviot-dr. was adjourned for the submission of amended plans to meet objections by adjoining householders.

MORAY & NAIRN.—The building of a new sec. sch. for Upper Moray at Grantown-on-Spey, where there are serious accommodation problems and sub-standard conditions, is under consideration by Moray and Nairn Ed. Com.

PERTH.—Plans for a new prim. sch. at Letham housing estate have been passed by Perth Dean of Guild Court. Work on the school, which will consist of 16 classrooms, a general purpose room, assembly hall, and gymnasium, is expected to begin shortly. It will cost almost £152,000, and will accommodate 680 pupils.

WISHAW.—A new £100,000 three-storey department store is to be built in Main-st., Wishaw by Bairds Ltd., outfitters.

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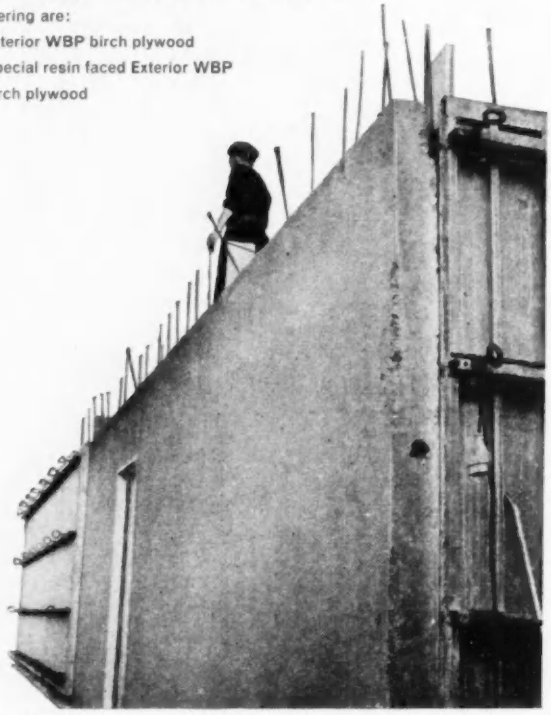

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C.I.

THE BUILDER CONSTRUCTION NEWS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list, see previous issues. Those preceded by the symbol (A) are advertised in this number. The latest date for the receipt of tenders or applications appears above each paragraph. The symbol (R) preceding each entry indicates that application must be received by this date.

BUILDING

JULY 24

(AR) SIDMOUTH UDC.—Erection of 17 flats at Roxburgh site, Sidmouth. Clerk to C.

JULY 26

(AR) BRISTOL CITY C.—Fixed price tenders for alterations to form office accommodation at 'The Bristowe,' Cabot-hse., Deanery-rd., Bristol 1. City A.

(AR) PLYMOUTH CITY C.—(a) Provision of new changing room and alterations to existing Ham playing fields, Devonport; (b) provision of dining room and kitchen at North Prospect prim. sch. City A. Dep. £3 3s. (each contract).

JULY 27

(AR) BIRMINGHAM CITY C.—Erection of register office for births, deaths and marriages, at Broad-st., Birmingham 1. City A.

(AR) CRAWLEY DEVELOPMENT CORPN. —Erection of 307 dwellings, each with lock-up garage, at Furnace Green neighbourhood. Ch. A.

JULY 28

(AR) BRISTOL CITY C.—Erection of a branch library at Bishopsworth. City A.

(AR) NEWCASTLE REGIONAL HOSPITAL BD.—New radiotherapy centre at Newcastle General Hospital. Sec. to Bd.

(AR) SWINDON BC.—Erection of 129 dwellings at the Park Neighbourhood. Boro' A.

(AR) WORCESTERSHIRE CC.—Erection of new buildings for existing Castlemorton CoE sch. Pemberton & Bateman, architects, 21 Vine-st., Evesham.

JULY 31

(AR) CRAYFORD UDC.—Firm price tenders for the erection of a pavilion at Mayplace playing fields, Crayford. E&S.

(AR) EAST SUSSEX CC.—Erection of a three-bed. house with district room and garage, at Withyham nurses home. County A.

(AR) NORTHAMPTONSHIRE CC—Erection of Brackley sec. mod. sch. County A.

AUGUST 1

(AR) NORFOLK CC.—Fixed price tenders for the erection of a house, two sets of brick and asbestos farm buildings, etc., nr. Downham Market, Norfolk. County Land Agent.

AUGUST 2

(AR) DURHAM CC. — Alterations and improvements at Consett Police Station. County A.

(AR) WEST SUSSEX CC.—(a) Three classroom instalment of new prim. sch. at South Bersted, Bognor Regis; (b) one block of two semi-detached houses at St. Cuthman's sch., Midhurst. County A.

AUGUST 3

(AR) HERTFORD BC.—Erection of 71 dwellings at Sele Farm estate. TC.

AUGUST 4

(AR) MALDEN & COOMBE BC.—Conversion of 140-142 Dukes-ave. into 11 flatlets. Boro' E&S.

(AR) SWANSEA CBC.—Erection of a cafe and public convenience at Bracelet Bay, Mumbles. Boro' A. Dep. £5.

AUGUST 8

(AR) EAST SUSSEX CC.—Extensions to Portslade CS sch. for girls. County A.

(A) WREXHAM BC.—Fixed price tenders for 66 dwellings and 42 garages at Montgomery-rd. Boro' S. Dep. £2 2s.

AUGUST 10

(A) HUNTINGDON & GODMANCHESTER BC.—Erection of a block of six unit factories at Huntingdon. Lea, Milner & Wardley, architects, 4 Market Hill, Huntingdon. Dep. £2 2s.

AUGUST 14

(A) FARNWORTH BC.—Alterations to slipper baths and boiler house, etc., at the Public Baths, King-st. Boro' E&S.

AUGUST 18

(A) SWANSEA CBC.—Erection of Hall of Residence at Swansea Training College. Boro' A. Dep. £5.

AUGUST 21

(A) FROME UDC.—Erection of 65 dwellings, etc., at The Mount housing estate. E&S. Dep. £2 2s.

(A) KEYNSHAM UDC. — Housing at Broadlands estate. A to C. Dep. £2 2s.

AUGUST 22

(A) ILFORD BC.—Construction of bowls pavilion at Valentines Park. Boro' E. Dep. £2 2s.

AUGUST 28

(A) SOUTHPORT CBC.—Erection of 56 houses at Staveley-rd. housing site, Ainsdale. Boro' A. Dep. £2 2s.

NO DATE

(A) WIMBLEDON BC.—Various building works for the Open Space and Cemetery dept., Gap-rd. Superintendent of Dept.

SERVICES, PAINTING, MATERIALS, ETC.

JULY 31

(AR) NORTHAMPTONSHIRE CC.—Heating installation for a new sec. mod. sch., Brackley. County A.

AUGUST 3

(A) EAST RIDING OF YORKSHIRE CC. —Installation of heating and hot and cold water services for the proposed new CS sch., Pulford, York. County A.

AUGUST 4

(AR) PORTSMOUTH CITY C.—Modernisation of pre-war flats at Portsea (two contracts). Director of Housing. Dep. £1.

AUGUST 8

(A) UXBRIDGE BC.—Re-rendering and clean shingling of 186 houses and bungalows (two separate contracts). Housing Manager.

AUGUST 11

(A) SOUTHPORT CBC.—Exterior painting of 71 dwellings at Drewitt-cres. Boro' A & Town Planning Officer. Dep. £1 1s.

SEPTEMBER 5

(A) HARROW BC.—Erection of boundary and garden fences, front, side and rear entrances, etc., on various estates. Boro' E&S. Dep. £2.

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MUNICIPAL AND CIVIL ENGINEERING WORKS, ETC.

JULY 31

(A) TRING UDC.—Roads and sewers at Meadow-cl. Woodroffe, Buchanan & Coulter, architects, 41 High-st., Tring, Herts.

WORCESTERSHIRE CC.—Fixed price tenders for the laying of approx. 3,100 yd. of surface water sewer varying in size from 27-in. dia. to 9-in. dia., together with the construction of manholes, gullies, and other ancillary works, at Long-la., Halesowen. County S. Dep. £5.

AUGUST 23

(A) CARDIFF CORPN.—Fixed price tenders for a new river intake and pumphouse at Usk, nr. Monmouthshire. E. Dep. £10 10s.

AUGUST 28

WALSINGHAM RDC.—Fixed price tenders for the laying of approx. 1½ miles of 6-in. dia. concrete and glazed ware sewers, with all necessary manholes, branch sewers and drain connections, and approx. 1½ miles of 4-in. dia. cast-iron rising mains, two pumping stations, together with other works incidental thereto, in the parishes of Binham and Langham. A. P. I. Cotterell & Son, engrs., 54 Victoria-st., SW1. Dep. £5 5s.

AUGUST 30

(A) WIDNES BC.—Erection of 1,600 yd. of concrete fencing at Kingsway estate. Hsg. Mgr. Dep. £2 2s.

GENERAL BUILDING WORK (LONDON)

HAMMERSMITH.—Special School.—The LCC's Ed. Sub-Com. have approved plans for building a new sch. for 200 educationally sub-normal boys and girls of all ages at Banim-st., Hammersmith. The cost will be £105,930.

HAMMERSMITH.—Physical Recreation. —The LCC has appointed Messrs. Yorke, Rosenberg & Mardall, architects, for the construction of a swimming bath, with a gymnasium on the floor above, at Stamford-hse. remand home and classifying centre, Hammersmith, at an estimated cost of £45,845. The remand home has accommodation for 100 boys under 17 years of age but at periods of heavy demand for places it has frequently housed more than 120 boys.

HAMPSTEAD.—Planning Applications.—The following town planning applications have been received by the LCC: Shops, with maisonettes over, at Englands-la. (Douglas Stephen & Ptnrs.); demolition of existing church and erection of new church, flats and shops, at Trinity Presbyterian Church, Hampstead High-st. (D. Watney, Eiloart Inman & Nunn); revised scheme for redevelopment as flats, at Oak Hill Park/Oakhill Lodge/Oak Hill House (M. Lyell Associates).

ISLINGTON. — Children's Home. — 75a Mildmay-park, Islington, is to be adapted by the LCC for use as a short-stay home for twelve children at an estimated cost, including furniture, of £11,840.

ISLINGTON.—School Site.—The LCC's Ed. Sub-Com. propose to acquire an additional site for the enlargement of Tudor county sec. sch., Islington. The MoE considers that a site of 3.2 acres is too small for a sch. for 1,300 boys and girls and the extra land will increase the size of the site to 4.811 acres. It is estimated that the cost of acquiring the land—which comprises 38 houses, a shop, a public house and a vacant plot—will be £95,000.

LAMBETH. — Office Building. — London Merchant Securities Ltd. through a subsidiary have acquired the site of Century-hse., 82-108 Westminster Bridge-rd., SE1, and propose to erect an office building of 21 storeys and basement (tower block) and a link block of lower height. Architects are Devereux & Davies, 3 Gower-st., WC1; Clarke, Nichols & Marcel, consulting engineers; H. R. Heasman & Ptnrs., quantity surveyors. Moss & Ptnrs. are sole letting agents.

LAMBETH.—Planning Applications.—The LCC has received the following town planning applications: (a) Headquarters for Consumers' Assn.; (b) exhibition building and flats, both at South Bank (Architects' Co-partnership and Moiret & Wood, respectively); wine and spirit warehouse, offices,

etc., at Stockwell Green/Stockwell-gr./Southesk-st. (Tripe & Wakeham).

LEWISHAM. — Planning Applications. — The LCC has received the following town planning applications: Erection of 60 flats and 40 garages at Belmont Park (Huckle & Dunkin); erection of a supermarket at Rushy Green (H. Owen Luder).

LONDON (City).—College Improvements. —The LCC's Ed Sub-Com. have approved a scheme submitted by the governors and estimated to cost £109,904 for improving the premises of the City of London College at Electra-hse., Moorgate.

STOKE NEWINGTON.—New School.—A number of special features are to be incorporated in the design of a new sch. for 105 partially-sighted boys and girls which is to be built at Clissold-rd., Stoke Newington, by the LCC at a cost of £124,280.

WANDSWORTH.—Hall of Residence.—The LCC's Ed. Sub-Com. propose to use a site in Cowland-gr., Wandsworth, for the erection of a second hall of residence for Battersea College of Technology.

WANDSWORTH.—Site Acquisition.—The LCC's Housing Com. propose to acquire, by compulsory purchase if necessary, a site of about 32¼ acres zoned for residential development, comprising 75 old but substantial houses, with extensive gardens, occupied by about 370 families. Acquisition, clearance and partial redevelopment is expected to cost about £838,000. A part of the site will be required for road improvement purposes and consideration will be given to the reservation of about ¾ acre for the purpose of the Children's Com. Certain portions which have been redeveloped with modern blocks of dwellings or houses and properties which have been completely modernised within recent years, have been omitted from the site which it is proposed to acquire. Some 600 dwellings could be provided at the zoned density, with provision for pleasant amenity grounds which will preserve the character of the locality.

WOOLWICH.—New School.—The LCC's Ed. Com. have agreed to build a boarding house for 120 boys and girls at Crown Woods sch., Woolwich, primarily for children of members of the Forces serving overseas. The cost of the building will be about £158,820. The Com. have also approved plans for a new sec. sch. for 1,000 girls at Blakesley-st., Stepney, to be built at a cost of £493,650.

(PROVINCIAL)

ACCRINGTON.—Following for BC: Considering erection of new luxury baths adjoining existing premises; erection of aged peoples' dwellings at Plantation Mill-sq. site; approval in principle given erection of shops at Broadway.

BASINGSTOKE.—BC has approved plans of 4-blocks of 20 maisonettes, 4-storeys high to be built at South Ham.

BATLEY.—TC are to erect 69 dwellings, costing £120,135, as the first stage of the Batley Carr re-development scheme. . . . TC are to build 52 dwellings on land off Mayman-la. and 13 shops with maisonettes above in Upper Commercial-st.

BEDALE (Yorks).—RDC are to erect 32 houses and 24 bungalows at South End. Council's architect is K. V. Shaw, Market-pl., Bedale.

BIGGLESWADE.—RDC propose houses at Sandy-rd., Everton.

BILLINGHAM-ON-TEES.—UDC Housing Committee has approved the erection of 10-storey blocks of flats, and the architects, Messrs. Elder and Lester, Town-sq., Billingham, have been authorised to proceed with plans.

BISHOP AUCKLAND.—Westool Ltd., electrical engineers of St. Helen's, Auckland, Co. Durham, are to offer houses and bungalows for sale to their employees on special terms. In conjunction with William Leech (Builders) Ltd., 7/8 St. James-st., Newcastle-on-Tyne 1, they are developing an estate of 60 properties at High Etherley, near Bishop Auckland, for sale exclusively to members of the company.

BOLTON.—BC propose erection of multi-storey car park at Howell Croft South.

BOOTLE. — Lynton Holdings Group, London, propose shopping centre at Netherton.

CAMBERLEY.—UDC propose new civic hall, £100,000 est.

CHANDLERS FORD. — Hants. CC approved plans for proposed Oakmount county jun. sch.

CHAPEL-EN-LE-FRITH.—RDC propose improvements and repairs to dwelling houses at Highfields and Peak Dale, at an estimated cost of £700 per house.

CHEADLE. — RDC propose residential development on a 6.77-acre site at Hollington-rd., Tean.

CHEADLE.—Approval in principle has been given by RDC to a scheme for housing old people.

CHIPPENHAM (Wilts).—Lackham School of Agriculture has received MH&LG approval to start work on new rural domestic economy block and for large modern covered yard and milking parlour at Home Farm. Phase III in development programme will include extension of hostel and classrooms to accommodate further 30 students.

COOKHAM (Berks.).—County Planning Officer has approved lay-out plan for 53 flats, maisonettes and houses, together with garages, parking spaces and children's playground for RDC.

COOKHAM.—Plans submitted to RDC: Church at Oakley Green, Bray, for Rev. S. W. Doran. Go-Kart racing track at Hawthorne Hill for Mr. J. Lipton; Housing at West Mead, Cookham, for Mrs. D. Cooper; Maisonettes, flats, houses, garages at Whyteladyes-la., Cookham, for RDC; petrol filling station at Whiteladv Poultry Farm, Windsor-rd., for Whitelady Poultry Farm Ltd.; housing development at Straight Mile, Shurlock Row, for Mr. A. J. Whiting.

DURHAM.—County Planning Committee are planning the construction of a new town at Washington to cost £50,000,000. Provided Government approval is received, work on the first stage will commence in 1963. Sixteen thousand houses to accommodate a population of 66,000 are proposed.

ETON.—Erection of dwellings at Agar's Plough for Eton College. Architects: Clifford Culpin & Ptnrs., 39 Doughty-st., WC1.

FARNBOROUGH.—Governors of Salesian College propose new science block and domestic buildings, £130,000 est.

GATESHEAD.—Plans have been prepared by Wallis Gilbert and Partners, 5 Cromwell-rd., South Kensington, London, SW7, for the erection of a two-storey office block at Queensway, Team Valley estate, for Hoover Ltd., Greenford, Middlesex.

GODALMING.—BC propose housing development at Latimer-rd./Town End-st.

GUILDFORD.—BC propose 30 houses and garages at rear of Yew Tree-drv., Bellfields, and a 2-storey central youth club premises at North-pl.

HAMPSHIRE.—Planning Committee is to offer no objection in principle to the master-plan for the modernisation of the Upper Barracks by the WD as permanent headquarters for the Green Jackets Brigade.

HANTS.—Hants & Isle of Wight Police Auth. propose erection of garages, £80,000 est.

HARROGATE.—James Miller & Ptnrs. Ltd. propose erection of 30 flats in multi-storey blocks with garages at Lancaster-rd.

HEMEL HEMPSTEAD.—Kodak Ltd. propose new depot and offices, £900,000 est.

HENLEY.—BC propose aged persons' dwellings at Harpsden-rd./Peppard-la.

LEATHERHEAD.—UDC propose 16 flats in two-storey blocks, eight bungalows, six flats and warden's cottage at Upper Farefield-rd.

LEEDS.—TC propose erection of remand home for boys at Skelton's-la. . . . Industrial & Investment Services Ltd. propose erection of shopping arcade/offices at Empire Theatre site. . . . Moore & Co. (Leeds) Ltd. propose erection of offices/warehouse/workshop at Sweet Street light industrial estate. . . . Town Centre Securities Ltd. propose major developments at Merrion-st. area.

NEWDIGATE.—Church Auth. propose rebuilding of the CoE prim. sch.

OXFORD.—J. A. Pye (Oxford) Ltd. propose shopping centre at the Warden Hill estate.

READING.—BC propose new swimming pool at Bedford-rd., and extensions at Coley sch. for EC. . . . Oxford Regional Hospital Bd. propose a 12-storey ward block and three-storey clinic at the Royal Berkshire Hospital. . . . TC has approved Nursery garden, Bedford-rd., as most suitable site for construction of new swimming pool. Est. £150,000.

SLOUGH.—22-24 Lansdowne-ave., Slough, has been purchased for use as a home for 17 older girls. The total cost of acquiring, adapting and furnishing the premises as a home is estimated at £23,430. . . . The LCC's Children's Com. propose to arrange for the erection of a hostel for boys aged 15-17 at Britwell estate, Slough, to be carried out as part of the value-cost contract with Holland & Hannen and Cubitts (Gt. Britain) Ltd., for the development of the housing estate at Britwell. The estimated cost is £35,275, an increase of £8,875 over what was originally envisaged, owing to modifications to contract particulars, higher standards adopted since the original estimate was prepared, and increased cost of labour and materials.

SOUTH SHIELDS.—TC are being recommended to spend £55,000 on the construction of a residential home. The work will be carried out in 1963-64. Boro' E is J. Reid.

STANLEY (Co. Durham).—UDC are planning the erection of houses on the site of an 11-acre pit heap between the town and South Stanley housing estate. The Council's S is R. H. Snowball. . . . UDC is to negotiate with Thomas Armstrong Ltd., builders and contractors, 16 Robson-st., Newcastle-on-Tyne, for the erection of further houses on the Lintz housing estate. . . . Revised sketch plans are being considered by the UDC for extensions to the Council offices. Architects are P. L. Browne, Son & Harding, Pearl-bldgs., Northumberland-st., Newcastle-on-Tyne.

TAPLOW.—F. Adams Ltd., Maidenhead, propose erection of flats and garages at Stockwells, Berry Hill.

WALTON-ON-THAMES.—Park Investments Ltd. have recently purchased a 6½-acre site at Walton-on-Thames, Surrey, and have also acquired sites in Chelsea, for the erection of an 8-storey block of luxury flats, and further sites in Bournemouth, Bristol and Worthing for additional development.

WAYNEFLETE. — Parent/Teacher Association propose new swimming pool at county sec. sch.

WESTBURY (Wilts).—Associated Portland Cement Mfrs. Ltd. are seeking approval for amended plans for their proposed cement works at Westbury.

WEST HARTLEPOOL.—G. T. Brown & Son, architects, 14 Grange-ter., Stockton-rd., Sunderland, are the architects for a proposed Church of Jesus Christ of Latter-Day Saints. No contracts let. Cost will be about £100,000.

WHITEFIELD (Lancs.).—Council have granted planning permission for the erection of a new RC prim. sch. in Bury New-rd.

WIGTON.—North-Eastern Housing Assoc., 5 Windsor-ter., Jesmond, Newcastle-on-Tyne, are to erect 74 houses on behalf of RDC.

WINCHESTER.—Hampshire & Isle of Wight Police Auth. has approved following: Preliminary plans prepared by County A (W. Ansell) for an eight-storey building to replace present County Police Headquarters at Castle Hill, Winchester; and five-year

Contracts Placed

We are glad to receive from architects and quantity surveyors for publication details of contracts placed to the value of £20,000 or over. Such information should reach the Editor as soon as possible after the contract is signed. Names of the architect and other consultants associated should be given.

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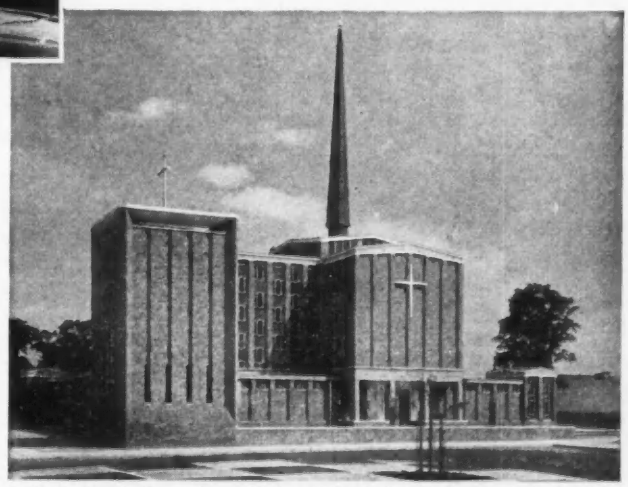

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Cheltenham, Gloucestershire

programme to provide garages for all police houses. Est. £80,000.

WINCHESTER.—TC propose new block of offices in the Brooks area, and shop development at the corner of Silver Hill and Middlebrook-st.

WINDSOR.—Berks. EC propose reconstruction of county gram. sch. for girls, Imperial-rd., est. £263,286

WOKING.—Prison Commissioners propose new detention centre at Send, est. £60,000. . . . BC has received approval for a ten-storey block of flats on site of the Cotteridge Hotel at junction of Guildford-rd. and Constitution Hill, and four-storey block of flats on adjoining site.

WOODLEY.—Mrs. S. Symons proposes flats and houses at Mill-la. Inquiry held.

TENDERS

(A) Denotes *accepted.*
(PA) Denotes *provisionally accepted.*
(RA) Denotes *recommended for acceptance.*
(AM) Denotes *accepted subject to modification.*
(GD) Denotes *accepted subject to approval by appropriate Government Department.*

BOURNEMOUTH.—Block of 62 luxury flats at Old Well House site for Bilesmede Properties Ltd. (A) Holland & Hannen and Cubitts Ltd., London.

BRISTOL.—New chemistry teaching block for Bristol University. Architects: Courtaulds Technical Services Ltd., Coventry. (A) Holland & Hannen and Cubitts (Gt. Britain) Ltd., £630,000.

COALISLAND.—Erection of 138 houses at Plater's Hill, Coalisland, for Dungannon RDC. (A) William Evans Ltd., Magherafelt, £244,622.

COSELEY.—New swimming baths for UDC. Architects: Scott & Clark. (GD) Wilson Lovatt & Sons Ltd., £242,000 (fixed price tender).

COULSDEN & PURLEY.—Erection of new library for UDC. (A) Williams Bros. (Carshalton) Ltd., London.

FELLING (Co. Durham).—Erection of 21 houses near the White-hse., Leam-la. estate for UDC. (A) Direct labour, £31,000.

GATESHEAD.—Erection of 212 houses and 60 garages on the Leam-la. estate for North-Eastern Housing Assoc., 5 Windsorter., Jesmond, Newcastle-on-Tyne. Plans by G. F. Winters, Boro' E. (A) W. D. & R. Allison & Son, North Guards, Whitburn, Co. Durham.

HAMPSTEAD.—New hydrotherapy pool, etc., at Franklin Delano Roosevelt sch., Avenue-rd. Designed by the LCC's Architect's Dept. (A) Frank R. Freeman Ltd., London, NW1.

HORSHAM.—Erection of 56 houses at Lamb Farm estate for the Land & General Development Group. (A) Griggs & Son.

LIMAVADY.—Erection of 248 houses at Irish Green-st., Limavady, under housing scheme No. 7 for UDC. (A) J. & H. E. Doherty Ltd., Coleraine, £400,799.

LONDON CC.—Improvement of intersections of Tulse Hill and Christchurch-rd., Lambeth.

T. H. Contractors Ltd.	£73,818
Arnold & Nathan Ltd.	64,108
Roads and Public Works Ltd. ...	62,146
Fitzpatrick & Son (Contractors) Ltd	62,140
Percy Bilton Ltd.	61,262
Alderton Construction Co. Ltd. ...	58,797
(A) Mowlem (Civil Engineering) Ltd.	54,078

Chief Engineer's comparable estimate is £56,939.

LONDON CC.—Road works for Elephant & Castle improvement scheme, Southwark.

T. H. Contractors Ltd.	£205,253
Fitzpatrick & Son (Contractors) Ltd.	190,793
Mowlem (Civil Engineering) Ltd. ...	177,712
(A) Alderton Construction Co. Ltd.	154,742

Chief Engineer's comparable estimate is £151,297.

LONDON CC.—Improvements and adaptations at Adamsrill CP sch., Lewisham.

W. R. Oldham Ltd.	£25,087
(A) R. H. Lynn & Co. Ltd.	23,482

Architect's comparable estimate is £20,766.

LONDON CC.—Construction of 30 maisonettes and flats, etc., at Walmer-rd. site, Kensington.

William Old Ltd.	£101,597
A. T. Rowley (London) Ltd. ...	100,872
J. M. Hill & Sons Ltd.	100,297
Harry Neal Ltd.	99,378
Howard Farrow Ltd.	98,542
Poolman (Builders) Ltd.	95,461
(A) Thomas McInerney & Sons Ltd.	91,789

Architect's comparable estimate is £79,082.

LONDON CC.—Playing field at Mary Datchelor girls' sch., Camberwell.

St. Mary's (Contractors), Ltd. ...	£33,289
A. Stevens, Senior	33,054
Edward Gait Construction, Ltd. ...	32,996
Turfsoil, Ltd....	32,258
(A) Kinman (Contractors), Ltd. ...	30,962

Comparable estimate of the chief office of the parks department is £37,500.

LONDON CC.—Extension to Brunswick Park CP sch., Camberwell.

Thomas & Edge, Ltd.	£29,050
William Willett (Contractors), Ltd.	28,722
Yeomans & Partners, Ltd. ...	28,590
C. P. Roberts & Co., Ltd.	27,532
Norman, Wright (Builders), Ltd. ...	23,700
(A) F. H. Beeching & Son (Keston), Ltd.	22,454

The appointed architects' comparable estimate is £22,150.

LONDON CC.—Erection of a Hall of Residence for Northampton College of Advanced Technology, and a new technical college, Finsbury.

Y. J. Lovell (London), Ltd. ...	£1,174,598
Trollope & Colls, Ltd.	1,146,900
Dove Bros., Ltd.	1,131,751
Patman & Fotheringham, Ltd. ...	1,118,711
Walter Lawrence & Son, Ltd. ...	1,077,586
Leslie & Co., Ltd.	1,038,947
(A) M. J. Gleeson (Contractors), Ltd.	1,005,884

Architects comparable estimate is £984,198.

LONDON CC.—Repairs, major improvements and redecoration at Battersea Institute and Lavender Hill CS sch., Battersea.

E. J. Lacy & Co., Ltd.	£53,821
Galbraith Bros., Ltd.	52,508
R. H. Lynn & Co., Ltd.	48,009
(A) H. T. Oliver & Sons, Ltd. ...	41,979

Architect's comparable estimate is £37,321.

(GD) LONDON (Admiralty). — Contracts over £4,000 in value: *N. Ireland:* Painting; Wilson Dodds (Painting Contractors) Ltd., Bradford. *Middlesex:* Construction of exhaust silencers; J. Murphy & Sons Ltd., London, N4. *Hampshire:* Demountable partitions; Norwood Steel Equipment Ltd., London, SE1.

(GD) LONDON (Air Ministry).—Contracts to the value of £4,000 or over for week ended July 14: *Building work:* Newton, Notts.; W. & J. Simons Ltd., West Bridgford, Nottingham. *Artificers' work:* Heywood, Lancs.; G. & J. Seddon Ltd., Little Hulton, Walkden, Manchester. Feltwell (Norfolk), etc.; Laughton & Fuller Ltd., Brandon, Suffolk. *Heating services (renewal of heating mains):* Stafford, Staffs.; Geo. S. Hall Ltd., Stoke-on-Trent, Staffs. *Roadwork (alterations and reconstruction):* London (Heathrow) Airport, Hounslow, Middx.; Stanley Hugh Leach Ltd., Hayes, Middx. *Electrical services, modification to airfield lighting and electrical mains distribution:* Kemble and Little Rissington, Glos.; T. Clarke & Co. Ltd., 110 Drury-la., Aldwych, London, WC2.

(GD) LONDON (British Railways).—Recent contracts placed by the Southern Region: *Kent:* Steelwork for new staff accommodation at Ashford; The Fairfield Shipbuilding & Engineering Co. Ltd., Chepstow, Mon. *Coulsdon:* Strengthening of Bletchingley road bridge; Aubrey Watson Ltd., Henley-on-Thames, Oxon. *Fishbourne Halt:* New staff accommodation; F. W. Hill (Bognor Regis) Ltd., Bognor Regis, Sussex. *Portsmouth:* New telephone exchange; John Lay & Co. (Portsmouth) Ltd., Portsmouth, Hants. *Angerstein Works:* Heating installation to switch and crossing shop; Clark Hunt & Co. Ltd., Enfield, Middx. *Battersea Park:* Reconstruction of Pig Hill Bridge; Dorman Long (Bridge & Engineering) Ltd., Luton, Beds. *Cliffe:* Reconstruction and widening of Cliffe Bridge; Leonard Fairclough (London) Ltd., London, NW5. *Woking:* Reconstruction of Wych Hill Bridge; Aubrey Watson Ltd., Henley-on-Thames, Oxon. *Exmouth Junction:* New staff accommodation; Stephens & Son Ltd., Exeter. *Waterloo:* Station renovations; Alfred Bagnall & Sons Ltd., Teddington, Middx. *Victoria:* Station alterations to catenary lighting; Pirelli General Cable Works Ltd., Southampton, Hants. *Victoria:* Modernisation of continental enquiry office; A. Edmonds & Co. Ltd., London, EC1. *Eastleigh:* Ventilation of C&W works; George E. Taylor & Co. (London) Ltd., London, SE1. *Newhaven:* Renewal of pumping main; K. Mikolay & Son Ltd., Newhaven, Sussex. *Dumpton Park:* Station renovations; C. Predeth (Builders) Ltd., Margate, Kent.

(GD) LONDON (War Dept.)—Contracts placed week ended June 23: *Devon:* Building at Denbury; Devon Contractors Ltd., Exeter. *Flintshire:* Roadwork at Sealand; J. W. Flather Ltd., Ellesmere Port. *Hampshire:* Painting; P. J. Hartel (Southern) Ltd., Southampton. *Middlesex:* Building at Whetstone; Allen Fairhead & Sons Ltd., Enfield. *Monmouthshire:* Building at Beachley; Joseph Cartwright Ltd., Mitcham, Surrey. *Warwickshire:* Roadwork at Long Marston; Tarmac Roadstone Ltd., Wolverhampton. *Wiltshire:* Building at Bulford; The Curtis Engineering Co., Frome.

(GD) LONDON (War Dept.).—Contracts placed for week ended July 7: *Dorset:* Building at Wyke Regis; A. E. Farr Ltd., Westbury. *Hampshire:* Water supply at Worthy Down; A. J. Dunning & Sons (Weyhill) Ltd., Andover. *Leicestershire:* Building at Melton Mowbray; E. Clarke & Sons (Melton Mowbray) Ltd., Melton Mowbray. *Monmouthshire:* Building at Beachley; Joseph Cartwright Ltd., London, SW16. *Warwickshire:* Miscellaneous at Long Marston; J. H. Woodward Ltd., Leamington Spa. *Yorkshire:* Painting at Catterick Camp; A. Hector Grabham Ltd., Sunderland.

NEWCASTLE-ON-TYNE.—Erection of a further 156 garages on various estates for City C. (A) G. M. Pearson & Son Ltd., Front-st., Hetton, Co. Durham. Erection of students' hostel at Northern Counties College, Longbenton. Plans by F. W. Harvey, City Ed. A. (A) John Laing Construction Ltd., Norham-hse., New Bridge-st., Newcastle, £75,000.

NEWTON-LE-WILLOWS. — Fixed price tenders for 18 flats and eight houses at Bradleigh-rd. estate for UDC. Quantities by Gornall Wainwright, St. Helens. (A) Direct labour.

NORFOLK.—New research laboratory at King's Lynn for Campbell's Soups Ltd. (A) R. S. Carter Ltd.

NORTH RIDING.—Erection of the proposed Whitby West county mod. sch. for EC. Architects: J. H. Napper & Ptnrs., 133

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Osborne-rd., Newcastle-on-Tyne. (A) John Laing Construction Ltd., New Bridge-st., Newcastle-on-Tyne, £188,946.

OLD FLETTON.—(a) 76 houses; (b) 41 garages; (c) external services to both for UDC. Ruddle & Wilkinson, Long Causeway-chbrs., Peterborough, architects and surveyors. (GD) Kell Harris (Contractors) Ltd., 791 Lincoln-rd., Peterborough, £167,366.

PLYMOUTH.—Extension to existing Mayflower factory at Whitleigh for C. & J. Clark Ltd. Engineer: Sir Alexander Gibb & Ptnrs., Queen Anne's Lodge, Westminster, SW1. Quantities by Venning & Hope, Castle Lodge, Taunton. (A) Dudley Coles Ltd., 6-13 Bath-st., Plymouth, £21,509.

SCARBOROUGH.—Erection of factory at Cayton-rd., Eastfield, for D. H. Greaves Ltd., photogravure printers, Oriel-wks., Scarborough. (A) F. Shepherd & Son Ltd., Blue Bridge-la., York.

SOUTH SHIELDS.—Factory additions of about 30,000 sq. ft. for Fry's Die Castings Ltd., Bede Trading Estate. Architects: G. H. Gray & Ptnrs., 8 Portland-ter., Newcastle-on-Tyne. (A) John Cummings, Matamba-ter., Sunderland (work started).

STAVELEY.—Erection of 80 three-bed. houses at Middlecroft estate for UDC. E&S is D. J. H. Strange. (A) Fleet Bros. Ltd., 72-74 Newgate-la., Mansfield, Notts., £136,488.

STEPNEY.—Construction of 29 dwellings and 20 garages, etc., at Christian-st. extension site, Stepney.

F. R. Hipperson & Son Ltd. ...	£98,870
Thomas McInerney & Sons Ltd. ...	95,470
Poolman (Builders) Ltd.	93,668
A. E. Symes Ltd.	85,465
Wm. J. Jerram Ltd.	84,778
H. C. Horswill Ltd.	84,750
Harry Neal Ltd.	84,045
(A) Stewart & Ptnrs. Ltd.	81,400

Architect's comparable estimate is £78,121.

STOCKTON-ON-TEES.—Erection of 31 houses at Hardwick for TC. (A) Direct labour.

TONBRIDGE.—Erection of 48 old people's flats for UDC. E&S is S. Simmons. (GD) Wm. F. Blay Ltd., Dartford, £73,971.

WANDSWORTH.—New block of flats at Putney for the Land & General Development Group. (A) Griggs & Son.

WATFORD.—Erection of 52 houses and 28 garages at Meriden estate for BC. Boro' E&S is F. C. Sage. (A) F. H. Hale & Sons (Builders) Ltd., 52 Bateman-rd., Croxley Green, Herts., £100,358.

WATFORD.—Extensions to the central library for BC. (A) Wm. King & Sons Ltd., Watford, £54,133.

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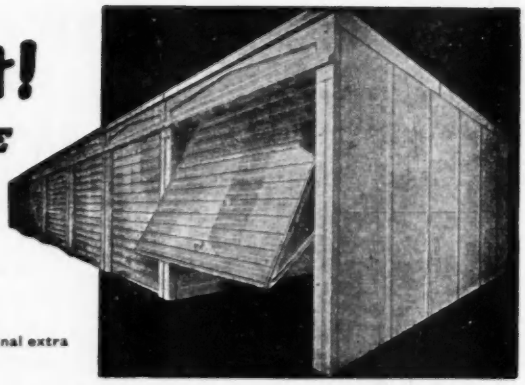

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CONTRACTS

HERTFORD
BOROUGH.

SELE FARM ESTATE.
CONTRACT FOR THE CONSTRUCTION OF 71 DWELLINGS, 52 GARAGES WITH DRAINAGE AND SITE WORKS.

The Corporation propose shortly to invite TENDERS from a selected list of Contractors for the above works which consists of :
12 HOUSES IN 3 BLOCKS.
11 3-STOREY HOUSES IN 2 BLOCKS.
48 FLATS IN 3 BLOCKS.
52 GARAGES IN 2 BLOCKS.

Drawings showing details of the work have been prepared by the Corporation's Architects, Messrs. Howes & Jackman, F.F.R.I.B.A., and Bills of Quantities are in preparation by Messrs. E. C. Harris & Partners.

Contractors who wish their names to be considered are requested to communicate with the undersigned not later than 3rd AUGUST, 1961, stating their general capacity to undertake the work and with details of recent works of a similar nature executed.

The tenders are required to be submitted early in OCTOBER, 1961

A. I. CLOUGH,
Town Clerk.

The Castle,
Hertford,
Herts.
11th July, 1961.

HARROW
BOROUGH.

ERECTION OF FENCES.

TENDERS are invited for the ERECTION OF BOUNDARY AND GARDEN FENCES, FRONT, SIDE AND REAR ENTRANCE GATES AND CLOSE BOARDED SCREENS AND GATES in the following of the Corporation's Estates :—

(1) Glebe Estate, Stanmore, Middlesex (approx. 4,800 Yd. Run Woodland Fencing).

(2) Weald-lane Estate, Harrow Weald, Middlesex (approx. 1,160 Yd. Run Woodland Fencing).

(3) Elmgrove Estate, Harrow, Middlesex (approx. 5,600 Yd. Run Woodland Fencing).

Conditions of Contract may be inspected at the Office of, and a copy of the Form of Tender and Specification obtained on application to, Mr. J. H. Melville Richards, M.I.C.E., M.I.Mun.E., A.M.I.Struct.E., Borough Engineer and Surveyor, Council Offices, "Cottesmore," 48 Uxbridge-road, Stanmore, Middlesex, upon payment of two pounds by crossed cheque for each Tender, made payable to the Harrow Corporation, and returnable where a bona fide Tender reaches the Corporation within the prescribed time.

Tenders on the prescribed form are to be enclosed in plain sealed envelopes bearing no indication or mark of the sender and carrying the label provided, suitably endorsed and delivered to the Office of the undersigned not later than 10 a.m. TUESDAY, 5th SEPTEMBER, 1961.

The Corporation does not bind itself to accept the lowest or any Tender.

D. H. PRITCHARD,
Town Clerk.

WREXHAM
BOROUGH.

66 DWELLINGS AND 42 GARAGES, MONTGOMERY-ROAD, WREXHAM.

FIXED PRICE TENDERS are invited for the above Contract.

Application for details, Tender Forms and Bills of Quantities to the Borough Surveyor, Guildhall, Wrexham, enclosing deposit of £2 2s., refundable on receipt of bona fide Tender.

Closing date for receipt of Tenders, TUESDAY, 8th AUGUST, 1961.

The Town Council does not bind itself to accept the lowest or any Tender.

PHILIP J. WALTERS,
Town Clerk.

Guildhall,
Wrexham.
5th July, 1961.

NORTHAMPTONSHIRE
COUNTY COUNCIL.

BRACKLEY SECONDARY MODERN SCHOOL.

TENDERS will be invited shortly for FOUR ADDITIONAL ROOMS IN TWO - STOREY LOAD - BEARING BRICKWORK. Contractors wishing to TENDER for (a) ERECTION, or (b) HEATING INSTALLATION are asked to notify the County Architect, County Hall, Northampton, by 31st JULY. From the names received the committee concerned will select firms to whom particulars will be sent.

J. ALAN TURNER,
Clerk of the Count) Council.

County Hall,
Northampton.

HUNTINGDON AND GODMANCHESTER
BOROUGH COUNCIL.

TOWN DEVELOPMENT ACT, 1952.
INDUSTRY—UNIT FACTORIES.

TENDERS are invited for the ERECTION OF A BLOCK OF SIX UNIT FACTORIES (2,000 sq. ft. each) at Huntingdon.

Bills of Quantities and form of Tender may be obtained from the Architects, Lea, Milner & Wardley, 4 Market Hill, Huntingdon, on payment of a returnable deposit of £2 2s., at which address plans may be inspected.

Completed Tenders, in plain sealed envelopes endorsed "Tender for Unit Factories," should be returned to the undersigned by NOON on THURSDAY, 10th AUGUST, 1961.

The Borough Council does not undertake to accept the lowest or any Tender and will not defray any expenses in connection with tendering, but Tenderers must make themselves fully acquainted with the site and conditions of work.

F. J. E. DYER,
Town Clerk.

Town Clerk's Office,
Ambury House,
89 High-street,
Huntingdon.

FROME
URBAN DISTRICT COUNCIL.

THE MOUNT HOUSING ESTATE, FROME.

The Council invite TENDERS for the ERECTION OF 65 DWELLINGS TOGETHER WITH MINOR SITE WORKS on the above site.

Copies of the Bill of Quantities and Form of Tender will be available from the 24th July and may be obtained from the Council's Engineer and Surveyor at whose office the drawings and Conditions of Contract can be inspected. Applications for documents should be accompanied by a deposit of £2 2s. returnable on receipt of a bona fide Tender and all documents.

Tenders, enclosed in a plain envelope bearing the printed label provided by the Council, must be delivered to the undersigned not later than NOON on MONDAY, 21st AUGUST, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

A. W. YOUNG,
Clerk of the Council.

Municipal Offices,
North-parade,
Frome.
10th July, 1961.

NEWCASTLE
REGIONAL HOSPITAL BOARD.

PROPOSED REGIONAL RADIOTHERAPY CENTRE AT NEWCASTLE GENERAL HOSPITAL.

The Board propose to ERECT A REGIONAL RADIOTHERAPY CENTRE AT NEWCASTLE GENERAL HOSPITAL.

The project will consist of a REINFORCED CONCRETE FRAMED BUILDING HAVING A BASEMENT AND FIVE STOREYS ABOVE. The concrete frame will be erected by the Main Contractor. The external cladding will consist mainly of pre-cast concrete panels having integral decorative finishes. The roof will be an in-situ concrete slab covered with built-up roofing felt. The total floor area of the building will be approximately 65,000 sq. ft.

Tender documents will be ready for issue to contractors during September, 1961, and it is expected that it will be possible for the building operations to commence in December, 1961.

The project has been planned by and will be carried out under the direction of the Regional Architect, Mr. P. H. Knighton, M.B.E., A.R.I.B.A.

Contractors wishing to Tender for this work are asked to submit their names to the Secretary of the Board, Benfield-road, Newcastle upon Tyne, 6, not later than 28th JULY, 1961. A limited number of contractors will be selected and asked to Tender but the lowest or any Tender will not necessarily be accepted.

MALDEN AND COOMBE
BOROUGH.

140-142 DUKES-AVENUE, NEW MALDEN, SURREY.
CONVERSION OF THE ABOVE PROPERTY TO PROVIDE 11 FLATLETS.

Contractors wishing to TENDER for the above-mentioned works are invited to submit their names within 14 days of the appearance of this advertisement to John Apse, A.M.I.C.E., Borough Engineer and Surveyor, Municipal Offices, New Malden, Surrey.

From the names submitted a panel of Contractors will be selected to whom tender documents will be sent in due course.

HAROLD E. BARRETT,
Town Clerk.

Municipal Offices,
New Malden,
Surrey.

CARDIFF CITY.

CORPORATION WATERWORKS.
LLANDEGFEDD WATER SCHEME—SECTION B.
CONTRACT NO. B. 1.
RIVER INTAKE, USK PUMPHOUSE AND SOR PUMPHOUSE.

Fixed price TENDERS are invited from experienced Civil Engineering Contractors for the CONSTRUCTION OF A RIVER INTAKE AND PUMPHOUSE NEAR USK, MONMOUTHSHIRE, and a PUMPHOUSE NEAR THE FOOT OF THE DAM OF THE LLANDEGFEDD RESERVOIR (now under construction) between New Inn and Common Coed-ypaen, also in Monmouthshire, comprising the following works :—

River Intake : REINFORCED CONCRETE CONSTRUCTION IN THE BANK OF THE RIVER USK.

Usk Pumphouse : REINFORCED CONCRETE AND BRICK BUILDING WITH CONCRETE AND BARREL VAULT ROOF TOGETHER WITH ANCILLARY SITE WORKS, ROADS, DRAINS, ETC.

Sor Pumphouse : REINFORCED CONCRETE AND BRICK BUILDING WITH CONCRETE AND BARREL VAULT ROOF, TOGETHER WITH ANCILLARY SITE WORKS, ROADS, DRAINS, ETC.

Tenderers must submit with their Tenders particulars of works, similar in character, which have been carried out by them.

Conditions of Contract, Specification, Drawings, Bills of Quantities and Form of Tender may be obtained from the Engineer, at Sluvad, Panteg, near Pontypool, Mon., to whom application should be made, accompanied by a deposit of £10 10s. 0d. Cheques should be made payable to Cardiff Corporation and crossed "Not negotiable and Co." The deposit will be refunded upon receipt of a bona fide Tender, or the return of the Contract Documents and Drawings.

Tenders must be submitted on the Form of Tender which will be provided, and enclosed with the Conditions of Tender in a small envelope marked on the outside only with the words "Tender for Llandegfedd Water Scheme—Section B. Contract No. B.1, River Intake, Usk and Sor Pumphouses."

A fully priced Bill of Quantities and any documents loaned by the Corporation for the purpose of submitting a Tender, and any drawings submitted with the Tender, must be sealed up in a separate large envelope marked on the outside only with the name of the firm submitting the Tender.

Both these envelopes must be enclosed in a third sealed envelope marked on the outside only with the words "Tender for Llandegfedd Water Scheme—Section B. Contract No. B.1, River Intake, Usk and Sor Pumphouses," addressed to the undersigned at the City Hall and sent by Registered post or recorded delivery so as to be received not later than 23rd AUGUST, 1961. This envelope must not bear any name or mark indicating the identity of the Tenderer.

The Corporation does not bind itself to accept the lowest or any Tender received.

S. TAPPER-JONES,
Town Clerk.

City Hall,
Cardiff.
July, 1961.

FARNWORTH
BOROUGH.

PUBLIC BATHS.

TENDERS are invited for ALTERATIONS TO THE SLIPPER BATHS AND BOILER HOUSE AND ANCILLARY WORKS at the Public Baths, King-street, Farnworth.

Drawings and general conditions of contract may be inspected at the offices of the Borough Engineer and Surveyor, Town Hall, Farnworth, from whom copies of the Specification, Bills of Quantities and Form of Tender may be obtained on application.

Tenders must be returned to the undersigned not later than 14th AUGUST, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

THOMAS HITCHEN,
Town Clerk.

Town Hall,
Farnworth,
Lancs.

SWINDON
BOROUGH.

PARK NEIGHBOURHOOD—ERECTION OF 72 AND 57 TRADITIONAL DWELLINGS.

TENDERS are shortly to be invited to contract for the ERECTION OF 72 AND 57 TRADITIONAL DWELLINGS in the Park Neighbourhood. Firms who wish to be considered for inclusion in the list of tenderers for such contracts should notify the Borough Architect, Civic Offices, Swindon, not later than FRIDAY, 28th JULY, 1961.

D. MURRAY JOHN,
Town Clerk.

ILFORD
BOROUGH.

BOWLS PAVILION, VALENTINES PARK.

TENDERS are invited for the CONSTRUCTION OF A BOWLS PAVILION in Valentines Park, Ilford.

Applications in writing for the Form of Tender, Bills of Quantities and Drawings should be made to the Borough Engineer, Town Hall, Ilford, accompanied by a deposit of £2 2s. 0d., which will be returned on receipt of a bona fide Tender (not subsequently withdrawn) and all documents issued.

Conditions of Contract may be inspected at the Borough Engineer's office during normal working hours.

Tenders sealed in the envelope provided, endorsed "Tender for Bowls Pavilion, Valentines Park" with no mark of identification as to the sender, must be delivered to the Town Clerk, Town Hall, Ilford, not later than 4 p.m. on 22nd AUGUST, 1961.

Priced Bills of Quantities must be returned at the same time as the Tender in the special envelope provided.

The Corporation do not bind themselves to accept the lowest or any Tender.

SWANSEA
COUNTY BOROUGH.

LOCAL EDUCATION AUTHORITY.
TO BUILDERS.

TENDERS are invited for the ERECTION OF THE HALL OF RESIDENCE at the Swansea Training College.

Drawings of the works and the General Conditions of Contract may be inspected at the Office of the Borough Architect, The Guildhall, Swansea. Builders desiring to tender must deposit the sum of Five Pounds with the Borough Architect on or before FRIDAY 18th AUGUST, 1961.

Bills of Quantities will only be issued to those builders who make the said deposit.

The deposit will be refunded after delivery of a bona fide Tender (not subsequently withdrawn) and the return of all documents.

Tenders must be delivered to me on or before the date stated in the Form of Tender and in accordance with the directions issued.

Work on site is estimated to start in December, 1961.

No guarantee is given that the lowest or any other Tender will be accepted.

IORWERTH J. WATKINS,
Town Clerk.

The Guildhall,
Swansea.
11th July, 1961.

BIRMINGHAM CITY.

TO BUILDING CONTRACTORS.
REGISTER OFFICE FOR BIRTHS, DEATHS AND MARRIAGES, BROAD-STREET, BIRMINGHAM, 1.

The General Purposes Committee propose to invite from selected firms TENDERS for the CONVERSION OF THE EXISTING COLLEGE OF COMMERCE, Broad-street, for use as a REGISTER OFFICE FOR BIRTHS, DEATHS AND MARRIAGES.

The work comprises extensive internal alterations to rooms, lavatories, etc.; building a two-storey Strong Room and access corridor at rear; additions of Lobby and Porte Cochère to front with replanning of the entrance driveway.

It is intended to invite tenders in the immediate future and the firms selected to submit tenders must be in a position to conform to a programme of work which, subject to receipt of necessary approvals, entails the erection of the Strong Room between OCTOBER this year and JUNE, 1962. The major alteration work must be completed between JANUARY and AUGUST, 1962.

Firms wishing to be considered should submit their names to the City Architect, Baskerville House, Civic Centre, Birmingham, 1, by not later than noon on 27th JULY, 1961.

T. H. PARKINSON,
Town Clerk.

The Council House,
Birmingham, 1.

PLYMOUTH CITY.

TENDERS are invited from Building Contractors for :—

(a) THE PROVISION OF NEW CHANGING ROOMS AND ALTERATIONS TO THE EXISTING at Ham Playing Fields, Devonport ;

(b) THE PROVISION OF DINING ROOM AND KITCHEN at North Prospect Primary School.

Applications, accompanied by a deposit of Three Guineas for each Scheme made payable to the Plymouth Corporation to be made to the City Architect, Seymour-road, Plymouth, from whom in respect of Scheme (a) Specifications, Drawings and Form of Tender and Scheme (b) Bills of Quantities and Forms of Tender, may be obtained.

No application received after the 26th JULY, 1961, will be considered.

Deposits will be refunded on receipt of bona fide Tenders not subsequently withdrawn.

SWANSEA
COUNTY BOROUGH.

TO BUILDERS.

TENDERS are invited for the ERECTION OF A CAFE AND PUBLIC CONVENIENCE at Bracelet Bay, Mumbles, Swansea.

Drawings of the works and the general conditions of Contract may be inspected at the office of the Borough Architect, The Guildhall, Swansea.

Builders desiring to Tender must deposit the sum of FIVE POUNDS with the Borough Architect on or before FRIDAY, 4th AUGUST, 1961.

Bills of Quantities will only be issued to those Builders who make the said deposit.

The deposit will be refunded after delivery of a bona fide Tender (not subsequently withdrawn and the return of all documents).

Tenders must be delivered to me on or before the date stated in the Form of Tender and in accordance with the directions issued.

Work on site is estimated to start in October, 1961.

No Guarantee is given that the lowest or any other Tender will be accepted.

IORWERTH J. WATKINS,
Town Clerk.

The Guildhall,
Swansea.
14th July, 1961.

KEYNSHAM
URBAN DISTRICT COUNCIL.

HOUSING—BROADLANDS ESTATE.

TENDERS are invited for the following works comprising the ERECTION OF 2 NO. THREE-STOREY BLOCKS EACH CONTAINING THREE FLATS AND SIX MAISONETTES, A TWO-STOREY CONNECTING BLOCK, 18 GARAGES AND PRAM STORES, CHILDREN'S PLAYGROUND AND ANCILLARY WORKS AT THE BROADLANDS ESTATE, KEYNSHAM.

Specification, Bills of Quantities, Form of Tender, Drawings and Conditions of Contract now available. Application should be made to the Architect, Council Offices, Keynsham, accompanied by a deposit of £2 2s. 0d. (by cheque payable to Keynsham U.D.C.) which will be refunded on receipt of a bona fide Tender not subsequently withdrawn and the return of all documents.

Tenders in plain sealed envelopes, endorsed "Housing" must reach the undersigned by not later than FIRST POST MONDAY, 21st AUGUST, 1961.

The Council do not bind themselves to accept the lowest or any Tender.

GEO. R. ASHTON,
Clerk of the Council.

Council Offices,
Keynsham,
Bristol.
21st July, 1961.

WEST SUSSEX
COUNTY COUNCIL.

Contractors wishing to submit a TENDER for EITHER OF THE UNDERMENTIONED SCHEMES are invited to apply for permission to tender; such applications, stating for which scheme(s) they wish to tender, to be addressed to the County Architect, County Hall, Chichester, to reach him not later than 2nd AUGUST, 1961.

(a) THREE CLASS INSTALMENT OF NEW PRIMARY SCHOOL at South Bersted, Nr. Bognor Regis (Job No. 6379).

(b) ONE BLOCK OF TWO SEMI-DETACHED HOUSES at St. Cuthman's School, Midhurst (Job No. 6824).

Quantities will be issued on or about 1st September, 1961.

The County Council does not bind itself to accept the lowest or any Tender, and the firm whose Tender is accepted must be prepared to enter into a contract in a form to be prepared by me.

T. C. HAYWARD,
Clerk of the County Council.

County Hall,
Chichester.

SIDMOUTH
URBAN DISTRICT COUNCIL.

BLOCK OF 17 FLATS,
ROXBURGH SITE, SIDMOUTH.

The Council are proposing to ERECT A BLOCK OF 17 FLATS on the Roxburgh Site, Sidmouth. Interested Contractors should submit their NAMES to the undersigned for consideration on or before 24th JULY, 1961. The Council will then draw up a short list, and selected Contractors will be supplied with a Bill of Quantities, form of Tender, etc.

Drawings can be inspected by appointment at the office of the Architect, Mr. John Radford, A.R.I.B.A., 14 Southernhay West, Exeter. Telephone No. Exeter 59237.

ERIC G. HOWARTH,
Clerk of the Council.

Sidmouth.

BRISTOL
CITY AND COUNTY.

ESTATES COMMITTEE.
TO BUILDING CONTRACTORS.

Estates Committee invite TENDERS FOR ALTERATIONS TO FORM OFFICE ACCOMMODATION AT "THE BRISTOWE," Cabot House, Deanery-road, Bristol, 1.

Contractors willing to submit a Fixed Price Tender, based on Bills of Quantities, apply to City Architect, Council House, Bristol, 1, by 26th JULY.

TRING
URBAN DISTRICT COUNCIL.

HOUSING SITE NO. 14,
ROADS AND SEWERS.

The Council invite TENDERS for the CONSTRUCTION OF ROADS AND SEWERS on their Housing Site No. 14 at the rear of Meadow-close, Tring. The site contains approximately 400 yards of concrete carriageways, 20 ft. wide and approximately 200 yards of 24 ft. wide standings for garages serving a proposed site of 103 housing units.

Firms willing to Tender should apply to the Council's Architects Messrs. Woodroffe Buchanan & Coulter, 41 High-street, Tring, Herts., who will make a selection of firms invited to tender. Tenders should be submitted to the undersigned not later than MONDAY, 31st JULY, 1961, in envelopes bearing no marks indicating the senders.

C. DAVIES,
Clerk of the Council.

Council Offices,
Tring,
Herts.
14th July, 1961.

UXBRIDGE
BOROUGH.

TENDERS are invited for the RE-RENDERING AND CLEAN SHINGLING OF HOUSES AND BUNGALOWS IN THE UXBRIDGE AREA as follows:—

Contract 109: 116 HOUSES, Manorways, Uxbridge.

Contract 110: 70 HOUSES, Frayswaye, Uxbridge.

Bills of Quantities and Forms of Tender may be obtained from the Housing Manager, 267 High-street, Uxbridge.

Tenders to be delivered in the envelope provided, marked Tender For Re-Rendering and Dashing Contract No. 109/110 and bearing no other mark or indication of the sender, to the undersigned not later than NOON on TUESDAY, 8th AUGUST, 1961.

E. RONALD WEST,
Town Clerk.

265 High-street,
Uxbridge,
Middlesex.

PORTSMOUTH CITY.

HOUSING DEPARTMENT.
MODERNISATION, PRE-WAR FLATS, PORTSEA.

TENDERS are invited for this work at the following properties:—

King-street (7-58 con.), 12 FLATS.
King-street (59-70 con.), 12 FLATS.

Applications for Tender documents should be sent to the Director of Housing, 1 Clarence-parade, Southsea, not later than 4th AUGUST, 1961, with a deposit of £1 returnable upon receipt of bona fide Tenders or return of all documents within three days.

The Council do not bind themselves to accept the lowest or any Tender. It is a condition of Tendering that the Contractor shall at the date of Tender have in his employment not less than one indentured apprentice to every eight craftsmen who were employed by him on the previous 1st January.

J. R. HASLEGRAVE,
Town Clerk.

RSM/RME.
17th June, 1961.

EAST RIDING OF YORKSHIRE
COUNTY COUNCIL.

TENDERS are invited for the INSTALLATION OF HEATING AND HOT AND COLD WATER SERVICES TO THE PROPOSED NEW COUNTY SECONDARY SCHOOL AT PULFORD, NEAR YORK.

Application for plans and specifications should be made to the County Architect, County Hall, Beverley.

No Tender will be considered unless received by the undersigned not later than 4 p.m. on THURSDAY, 3rd AUGUST, 1961, in a plain sealed envelope supplied by the Council, endorsed "Tender—Fulford County Secondary School—Heating Installation" and which shall not bear any name or mark indicating the sender.

THOMAS STEPHENSON,
Clerk of the County Council.

EAST SUSSEX
COUNTY COUNCIL.

PORTSLADE COUNTY SECONDARY SCHOOL FOR GIRLS.

TENDERS are to be invited for EXTENSIONS CONSISTING OF A LABORATORY, TWO CLASSROOMS AND CONVERSION OF HEATING SYSTEM TO OIL FIRING.

Contractors wishing to tender should apply before 8th AUGUST, 1961, to the County Architect, County Hall, Lewes, Sussex.

Selected Contractors will be provided with Bills of Quantities on 25th August, 1961.

WIMBLEDON
BOROUGH.

TENDERS are invited for various building works for the undermentioned Department, including the rebuilding of retaining walls, etc.

Forms of Tender and Drawings are available from the Superintendent, Open Spaces and Cemeteries Department, Wimbledon Cemetery, Gap-road, Wimbledon.

SOUTHPORT
COUNTY BOROUGH.

The Council invite TENDERS for the EXTERIOR PAINTING OF 71 DWELLINGS IN DREWITT-CRESCENT.

The Specification can be obtained from the Borough Architect and Town Planning Officer's Department, 99-105 Lord-street, on payment of one guinea which sum will be refunded on receipt of a bona fide Tender.

Last day for receipt of Tenders, 11th AUGUST.

DURHAM
COUNTY COUNCIL.

TENDERS invited:

Consett Police Station—ALTERATIONS AND IMPROVEMENTS.

Application for further details to County Architect, South-street, Durham, not later than 2nd AUGUST, 1961.

J. K. HOPE,
Clerk of the County Council.

Shire Hall,
Durham.

EAST SUSSEX
COUNTY COUNCIL.

WITHYHAM NURSES' HOUSE.

TENDERS are to be invited for the ERECTION OF A THREE-BEDROOMED HOUSE WITH DISTRICT ROOM AND GARAGE.

Contractors wishing to Tender should apply before 31st JULY, 1961, to the County Architect, County Hall, Lewes, Sussex.

Selected Contractors will be provided with specification and Tender documents on 12th August, 1961.

CRAYFORD
URBAN DISTRICT COUNCIL.

PAVILION.

Building Contractors are invited to submit their names for inclusion in a selected list for the ERECTION OF A PAVILION AT MAYPLACE PLAYING FIELDS, CRAYFORD. TENDERS will be invited on a firm price basis.

Applications, with details of other recent contracts, should be sent to the Engineer and Surveyor, Town Hall, Crayford, Kent, by 31st JULY, 1961. The Council do not bind themselves to include any applicant in the selected list.

G. B. HODGSON,
Clerk of the Council.

WORCESTERSHIRE
COUNTY COUNCIL.

EDUCATION COMMITTEE.

Applications for permission to TENDER are invited for the ERECTION OF NEW BUILDINGS FOR THE EXISTING CASTLEMORTON C.E. SCHOOL.

The building is of traditional construction, with brick walls and timber flat roof, together with the usual services. The area of the building is approximately 4,400 sq. ft. Applications should be made to Messrs. Pemberton & Bateman, Chartered Architects, 21 Vine-street, Evesham, not later than 28th JULY, 1961.

Plans are available for inspection at the architects' office and also at the County Architect's office, 14 Castle-street, Worcester. (P. 133.)

WIDNES
BOROUGH.

TENDERS are invited for the ERECTION OF 1,600 YARDS OF CONCRETE FENCING on the Kingsway Estate. Tender documents may be obtained from the Housing Manager, Town Hall, Widnes, on payment of a £2 2s. deposit refunded on receipt of a bona fide tender not subsequently withdrawn.

Tenders in the sealed envelope provided endorsed "Kingsway Estate—Fencing" to the Housing Manager not later than 12 noon on WEDNESDAY, 30th AUGUST, 1961.

FRANK HOWARTH,
Town Clerk.

Town Hall,
Widnes.

NORFOLK
COUNTY COUNCIL.

The Smallholdings Committee invite applications from Contractors desirous of submitting a FIXED-PRICE TENDER for the ERECTION OF A HOUSE, TWO SETS OF BRICK AND ASBESTOS FARM BUILDINGS, AND DEMOLITION OF EXISTING PREMISES, in one contract, at Outwell, near Downham Market, Norfolk.

Contractors should submit their name and address to the County Land Agent, 20 Hill House-road, Norwich, Norfolk, NOR 34S, so as to be received by 1st AUGUST, 1961.

Selected applicants will be provided with the necessary specification and plans.

BRISTOL CITY
AND COUNTY.

TO BUILDING CONTRACTORS.

Libraries Committee invite TENDERS for ERECTION OF A BRANCH LIBRARY (approximately 2,700 sq. ft.) at Bishopsworth, Bristol.

Contractors willing to submit Fixed Price Tender, apply to City Architect, Council House, Bristol, 1, by 28th JULY. Bills of Quantities, etc., will be issued shortly after.

CRAWLEY
DEVELOPMENT CORPORATION.

Invites applications from Contractors wishing to be considered for TENDERING upon Bills of Quantities for the ERECTION OF 307 DWELLINGS (INCLUDING THREE-STOREY HOUSES) EACH WITH A LOCK-UP GARAGE on Stage I of Furnace Green Neighbourhood of the New Town.

It is anticipated that the value of the works will be in the neighbourhood of £800,000.

Applications to Chief Architect, Broadfield, Crawley, Sussex, by 31st JULY, 1961.

LIVERPOOL CITY.
WATER DEPARTMENT.

VYRNWY AQUEDUCT.

TENDERS invited for EXTERIOR PAINTING AND INTERNAL DECORATION OF PROPERTIES. Documents from Water Engineer, 55 Dale-street, Liverpool 2, or Resident Engineer, Llanforda Filter Beds, Oswestry, Salop.

Tenders returnable by 4th SEPTEMBER, 1961.

THOMAS ALKER,
Town Clerk.

(J. 6930.)

PUBLIC APPOINTMENTS

BRECONSHIRE
COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

Applications are invited for the following established appointments:—

(a) ONE ASSISTANT ARCHITECT, A.P.T. Grade IV (£1,140-£1,310).

(b) TWO ASSISTANT ARCHITECTS, A.P.T. Grade III (£960-£1,140).

Applicants must be Associates of the R.I.B.A. or hold equivalent qualifications and should have considerable experience in design, construction and contract administration. Additionally, in respect of post (a), considerable general administrative experience is essential.

(c) ONE ARCHITECTURAL ASSISTANT, A.P.T. Grade II (£815-£960).

Applicants must have passed the Intermediate R.I.B.A. examination or its equivalent and had good architectural experience.

(d) TWO ARCHITECTURAL ASSISTANTS, A.P.T. Grade I (£645-£815).

Applicants should be capable draughtsmen and have had previous experience.

Application forms and conditions of appointment may be obtained from the County Architect, Rhyd Offices, Brecon, and completed applications must be received by the undersigned not later than 22nd AUGUST, 1961. Applicants must state whether to their knowledge they are related (as first cousin or nearer) to any member or senior officer of the Council.

The Authority has embarked on a STAFF HOUSING SCHEME and successful applicants will be considered for accommodation available.

C. M. S. WELLS,
Clerk of the County Council.

County Hall,
Brecon.

HUNTINGDONSHIRE.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

(1) TECHNICAL ASSISTANT (HEATING ENGINEER). Grade A.P.T. III (£960-£1,140) or Grade A.P.T. IV (£1,140-£1,310). Applicants for the Grade A.P.T. IV post must be qualified A.I.H. & V.E.

The person appointed will be a member of the Engineering Section of the Department, and duties will consist of all works connected with heating installations related to both small and large building projects. Applicants must be competent draughtsmen with experience in the design of heating and allied services.

(2) TECHNICAL ASSISTANT (ELECTRICAL ENGINEER). Grade A.P.T. III (£960-£1,140) or Grade A.P.T. IV (£1,140-£1,310). Applicants for the Grade A.P.T. IV post must be Chartered Electrical Engineers (A.M.I.E.E.).

The person appointed will be a member of the Engineering Section, and duties will consist of all works connected with electrical installations related to both small and large building projects.

Application forms may be obtained from S. M. Holloway, A.R.I.B.A., County Architect, County Buildings, Huntingdon, and completed forms should be returned to the undersigned by MONDAY, 31st JULY, 1961.

A. C. AYLWARD,
Clerk of the County Council.

County Buildings,
Huntingdon.

EALING
BOROUGH.

BUILDING SURVEYOR for district work, A.P.T. III, £1,005-£1,185 inclusive. Car allowance.

Appropriate qualifications and wide experience of building construction and building byelaws required.

Full particulars and application form from Borough Surveyor, Town Hall, Ealing, W.5.

Closing date: 31st JULY, 1961.

E. J. COPE-BROWN,
Town Clerk.

ASCOT
AND THE PRIVATE BUILDER: **4**

County Park Estate

Wingletye Lane, HORNCHURCH, ESSEX

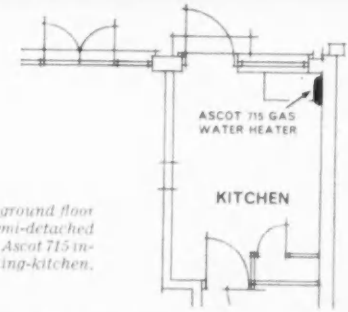
(370 semi-detached houses)

Builder:
Messrs. D. A. Moody and Co., Ltd., 178 Brentwood Road, Romford, Essex.

Hot Water:
Ascot 715 multipoint instantaneous water heaters.

This is the fourth in a series of case histories of recent housing projects in which Ascot water heaters have been chosen by private builders. The series is designed to show how the choice of hot water systems by Ascot for every type of modern dwelling gives flexibility of planning to the architect, ease of installation to the private builder, and a comprehensively efficient hot water service to the householder.

1. *A dining-kitchen in one of the Estate houses showing the Ascot 715 fitted in position over the draining board in a 9" wall.*
2. *A general view of part of the County Park Estate.*



Plan view of the ground floor of one of the semi-detached houses, showing Ascot 715 installed in the dining-kitchen.

Ascot is ideal for your building scheme!

REGD. TRADE MARK
ASCOT
WHG A466

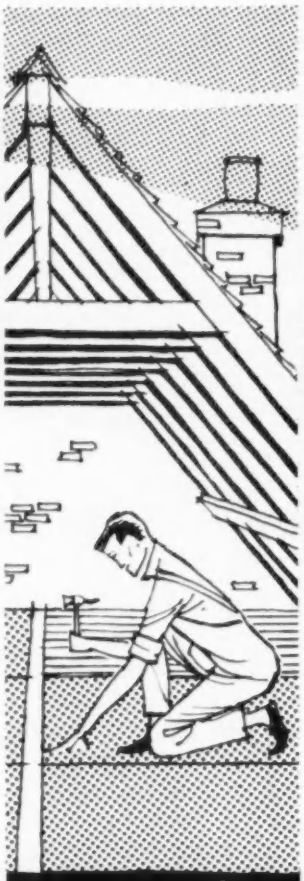
For full information write to
ASCOT GAS WATER HEATERS LIMITED,
255 North Circular Road, London, N.W.10

A Radiation Company

G*

NATURAL "BUILT-IN" SEALER

TIMBERIT gives a finer finish. No sealing, pre-sanding or filling is needed. TIMBERIT sealer is "built-in"—not just a surface coating, it is part and parcel of the board itself. With matt, gloss or eggshell finish one undercoat and one finishing coat are usually sufficient.

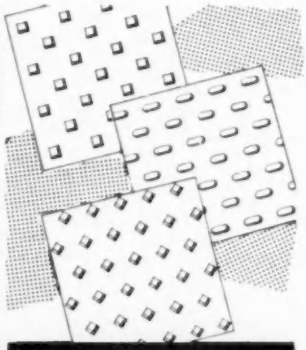


GREATER RANGE OF THICKNESSES

TIMBERIT is available in a variety of thicknesses making it the ideal building board for flooring, ceilings, partitioning, panelling, doors, roofing, concrete shuttering, etc. And Timberit bends with remarkable ease. Available not only in $\frac{1}{8}$" and $\frac{3}{16}$" but also in $\frac{1}{4}$", $\frac{5}{16}$", $\frac{3}{8}$" and $\frac{1}{2}$".

EXTERIOR USAGES

TIMBERIT tempered quality is produced specifically for external applications where weather conditions are a prime consideration. It is ideal in the construction of outside doors, roofs, farm buildings, boats and all work requiring efficient resistance to moisture penetration.



PEGBOARD

TIMBERIT pegboard is made in a unique range of nine attractive patterns in thicknesses of $\frac{1}{8}$", $\frac{3}{16}$" and $\frac{1}{4}$" in standard and tempered qualities. Satin-smooth, this sturdy material is ideal for countless display and decorative purposes or for tasks where accoustic problems are experienced.

and ARMOURBOARD

Armourboard is specially oil-treated and of great strength. It is economic in use producing a fair faced concrete and can be used over and over again. Available in thicknesses of $\frac{1}{4}$", $\frac{5}{16}$" and $\frac{3}{8}$".

* Pre-expansion—by wetting the screen side—is recommended for all applications.

BUILDERS PREFER TIMBERIT hardboard

Manufactured by
The African Building Board Corporation Ltd.

THOMAS SIMSON & CO. LTD., 6 GREAT WINCHESTER ST., LONDON, E.C.2.

★ The most comprehensive stock of **hardwoods and plywoods** in the country — catalogues on request.

★ The specialists with two centuries experience who can deliver your **hardwood and plywood** in the right condition at the right time — an organisation carefully planned to give rapid execution of orders.

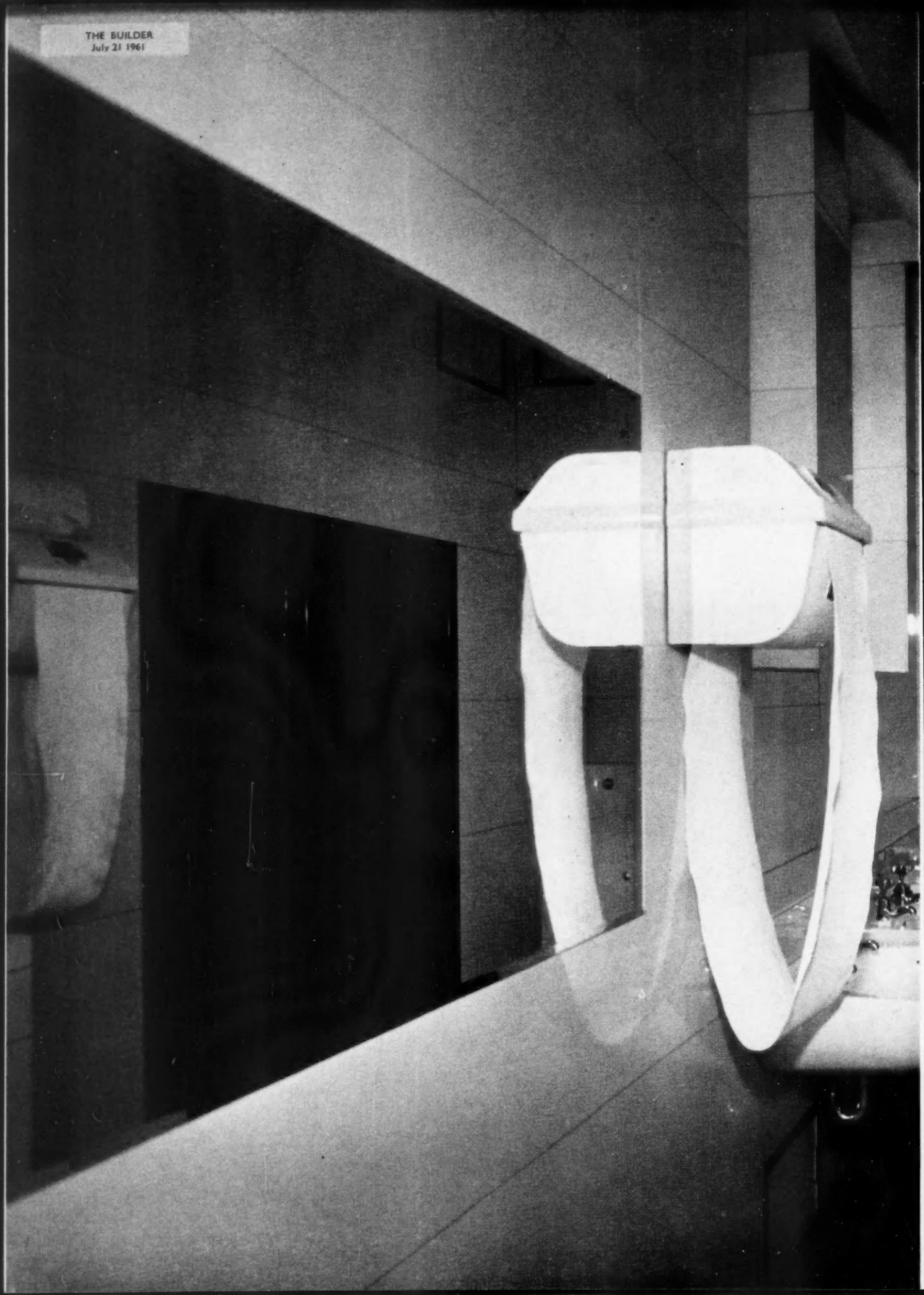
★ Daily deliveries to Home Counties and South—Three times weekly to Western and Midland Counties and East Anglia.
Every Thursday and Friday to Yorkshire, Lancashire and the Northern Counties.

JAMES LATHAM LIMITED

Manufacturers of **LATHAMCLAD & JOINERY MOULDINGS**

LEESIDE WHARF, CLAPTON, LONDON, E.5
AMHERST 5533 (11 lines)

BY APPOINTMENT
TO HER MAJESTY THE QUEEN
WOOD MERCHANTS



FOR PERMANENT HYGIENE

non-CRAZING "VITROLITE"

Hygiene is permanently safeguarded by the new high-finish "Vitrolite"* in the toilets of the new Barclays Bank branch, Broad Street, London. "Vitrolite" never crazes. Its permanently smooth surface provides no lodgement for germs; and attractive colour, inherent in the glass, gives a long-lasting, reassuring look of luxurious cleanliness.

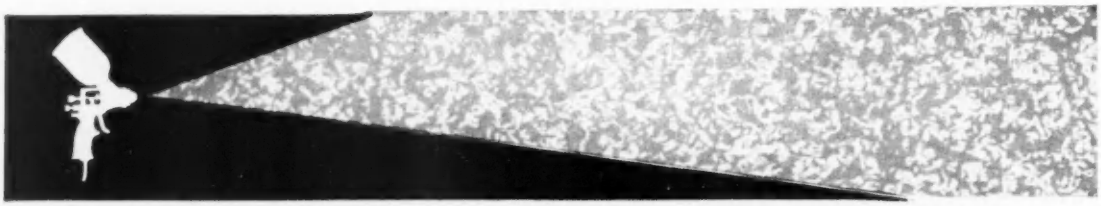
* Registered

Supplies available through the usual trade channels.

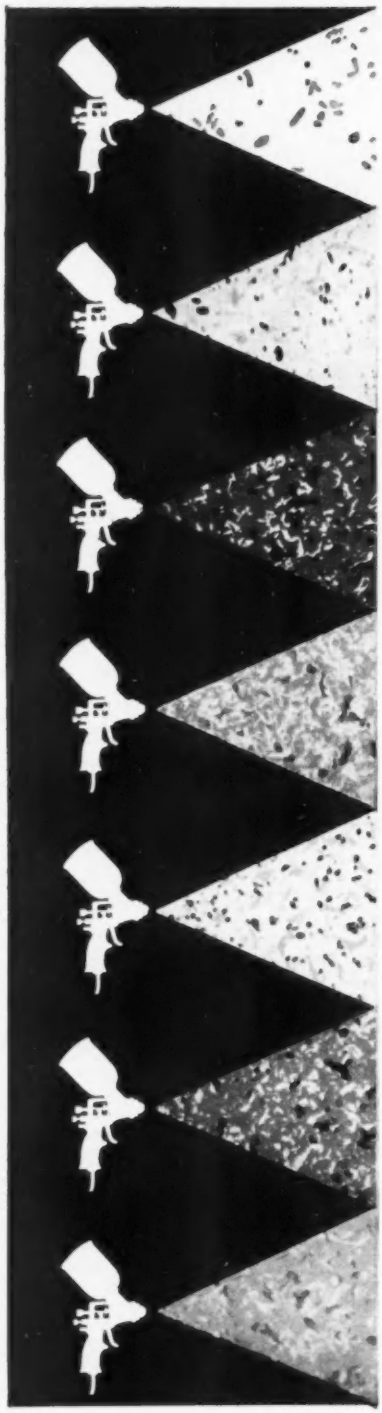
For full information about the new 'Vitrolite' write to:—

PILKINGTON BROTHERS LIMITED

ST. HELENS LANCS, (ST. HELENS 4001) SELWYN HOUSE, CLEVELAND ROW, ST. JAMES'S, S.W.1. (WHITEHALL 5672)



PORTERFLECK



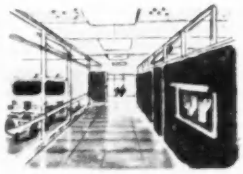
32 NEW, EXCITING MULTICOLOUR EFFECTS

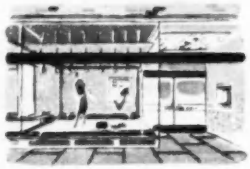
A rich multicolour finish in one spray application

...and it's dust repellent!

Here's a rich, decorative surface that looks like expensive plastic sheeting or a careful stippling job. Yet it's done in one quick spray application with this fascinating new paint, Porterfleck.

Porterfleck has startling physical characteristics: it keeps its secondary colour "flecks" suspended in the basic colour, so that they don't mix even when applied; and it is "anti-static"—its molecular composition stops dirt from settling and keeps the surface clean indefinitely.





Porterfleck saves maintenance

Besides its revolutionary dirt-repellent property, proof against normal accretion of dust and grime, Porterfleck has a very hard surface which is washable and highly resistant to scratching and chipping. It has an unusually long life and maintenance costs are cut almost to zero.

Porterfleck saves labour

The film produced by one coat of Porterfleck is 4-5 times as thick as a normal paint film, so it camouflages irregularities in plaster and other surface defects. Applied by spray, Porterfleck is touch-dry in 2 hours, hard overnight.

Porterfleck costs very little more than a traditional one-colour finish and can often be applied direct, thus saving the cost of priming and undercoating.

SPECIFY PORTERFLECK FOR...

... HARD WEAR in hotels, hospitals, halls and public rooms, canteens, kitchens, bathrooms ... QUICK APPLICATION in shop display, exhibition work, film, TV and theatre sets.

PORTERFLECK

Full details and shade card available on request from:
SISSONS BROTHERS & COMPANY LIMITED, BANKSIDE, HULL

From THE EXPANDED METAL COMPANY comes a significant advance in partitioning...

the new Permalock system

AS IMPORTANT AS THE SYSTEM ITSELF— THE SWIFT, COMPLETE PERMALOCK SERVICE

At your request a Technical Representative calls to explain the system—tells you about fire ratings, sound reduction, choice of panel boards, doors and windows—guides you on price—notes all your requirements.

A firm quotation will quickly follow . . . with a designed layout if required.

Work can begin at short notice . . . standard parts are supplied from stock and erected by our installation crews. In a surprisingly short time—panelling and glazing are under way.

**You are dealing with one company from start to finish . . . guaranteed materials and guaranteed service . . . at reasonable cost.*

The Permalock system is designed to . .

1 Sell at a price uncommon to quality partitioning.

2 Reduce site labour to an absolute minimum — keep down installation costs and to cause minimum disturbance.

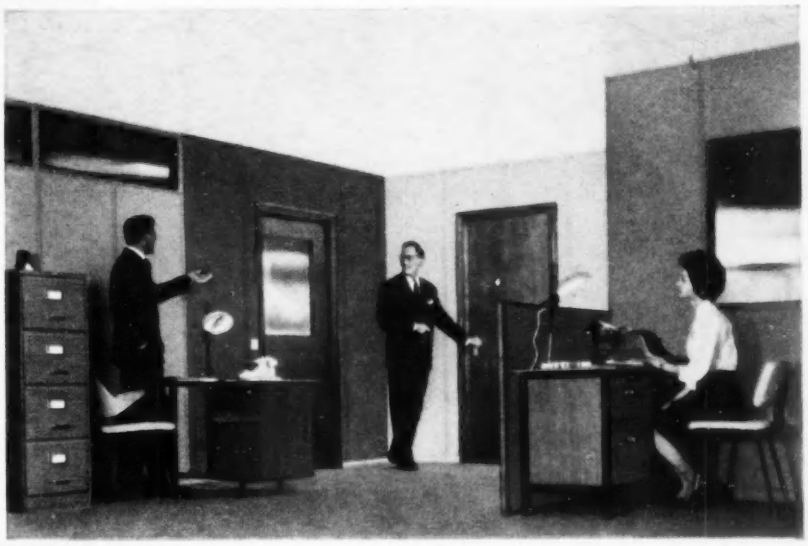
3 Use mass produced factory components of guaranteed quality and accuracy—to assemble into a lightweight steel framework—quickly.

4 Be versatile. To allow for a variety of panelboards to fix to the steel framework. Plasterboard or Chipboard, veneered, plastic faced or painted.

5 Be installed at short notice—without the need for any *detailed* drawings.

6 Be in keeping with surroundings, contemporary or traditional — new building or conversion.

Patents Pending



permalock *partitioning—durable, demountable*

A PRODUCT OF THE EXPANDED METAL COMPANY LTD.

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ABERDEEN	51862	CARDIFF	33757	MANCHESTER	Central 9855
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For
roofing insulation...

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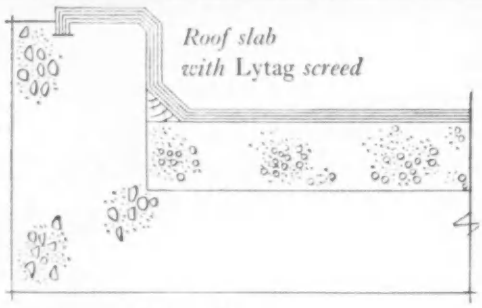
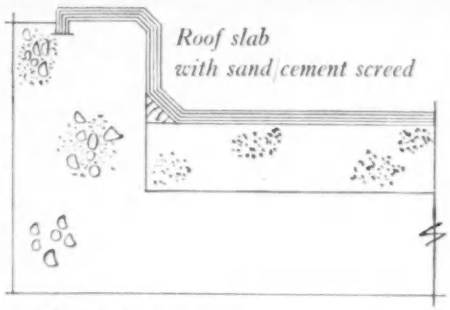
lightweight aggregate

The proof positive is in these comparative figures . . .



(K = 8·5) ¾″ asphalt
(K = 1·7) 4″ Lytag/cement screed
(K = 10·0) 6″ normal structural slab
'U' value = ·26
Wt. of screed ft/sup. 21·0 lbs.



(K = 8·5) ¾″ asphalt
(K = 9·0) 4″ sand/cement screed
(K = 10·0) 6″ normal structural screed
'U' value = ·48
Wt. of screed ft/sup. 42·0 lbs.

PROVED IN USE FOR:

Structural grades of concrete · Precast concrete · *In situ* roof and floor screeding · Refractory concrete

If you would like further technical details please write to:

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A LAING COMPANY

BARNSLEY
COUNTY BOROUGH.

APPOINTMENT OF DEPUTY BUILDING MANAGER.

Applications are invited for the new post of DEPUTY BUILDING MANAGER at a salary in accordance with Grade A.P.T. IV-V (£1,140-£1,480 per annum).

Candidates must be capable administrators and have had considerable supervisory experience with a large Municipal Building Department or Public Works Contractor. A sound technical and practical background in the various branches of the building industry is essential.

Further particulars and form of application available from the Building Manager, Corporation Building Department, Langdale-road, Barnsley, to whom completed applications must be returned by MONDAY, 14th AUGUST, 1961. Canvassing will disqualify.

A. E. GILFILLAN,
Town Clerk.

Town Hall,
Barnsley.
12th July, 1961.

MACCLESFIELD
BOROUGH.

APPOINTMENT OF BOROUGH ARCHITECT AND PLANNING OFFICER.

Applications are invited for the above appointment from persons who are members of both the Royal Institute of British Architects and the Town Planning Institute.

The appointment is subject to the Joint Negotiating Committee's conditions of service for Chief Officers, salary in the population range 30,000 to 45,000 (£1,630 x £75 (4)—£1,930).

The post is superannuable, subject to medical examination. Five-day week and interesting programme of work to be undertaken including housing, slum clearance, development for overspill and redevelopment of the town centre, including new administrative offices.

General conditions of appointment may be obtained from Walter Isaac, Town Clerk, Town Hall, Macclesfield, to whom all applications should be sent in envelopes suitably endorsed, giving age, qualifications and experience and the names and addresses of two referees, not later than NOON on TUESDAY, the 8th AUGUST, 1961.

BARNSLEY
COUNTY BOROUGH.

BOROUGH ENGINEER AND SURVEYOR AND PLANNING OFFICER'S DEPARTMENT.
APPOINTMENT OF ARCHITECTURAL STAFF.

Applications are invited for the following vacancies:—

(a) CHIEF ARCHITECT, Scale "B" (£1,505-£1,670).

(b) ASSISTANT ARCHITECT, A.P.T. V (£1,310-£1,480).

(c) JUNIOR ARCHITECTURAL ASSISTANTS (THREE), A.P.T. I (£645-£815).

Candidates for appointment (a) are asked to apply for further details of the post to the Borough Engineer. Applicants for appointment (b) must hold a recognised Diploma in Architecture and/or be A.R.I.B.A. For appointments (c) candidates should have had some architectural training and experience. Further study facilities can be granted.

The appointments are superannuable and subject to N.J.C. Conditions of Service, passing of medical examination and one month's notice on either side.

Housing accommodation can be provided if necessary and 50 per cent. of removal transport expenses will be paid in approved cases.

A five-day week is in operation and staff dining facilities are available.

Applications, naming vacancy applied for and stating age, qualifications, present and previous appointments and experience, together with the names of two persons for reference, should be sent to the Borough Engineer, Town Hall, Barnsley, by TUESDAY, 15th AUGUST, 1961.

Canvassing will disqualify.

A. E. GILFILLAN,
Town Clerk.

Town Hall,
Barnsley.
July, 1961.

LONDON
COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

Vacancies exist as follows in the Quantities Division:—

1. ESTIMATOR (Grade I) for pricing Bills of Quantities comparable with Tenders, including the supervision and direction of a small group of staff dealing with this work. Both Chartered Quantity Surveyors with particular experience in this field, and experienced builders' estimators would be considered for this post.

2. CHARTERED OR PARTLY QUALIFIED QUANTITY SURVEYORS (Grade II and III), for estimating and cost planning in connection with a variety of contracts, many of major value and importance.

Salaries within the range £1,500 and £1,700 (Grade I), £1,250 to £1,500 (Grade II) and £950 to £1,250 (Grade III). Starting points according to qualifications and experience.

Form and particulars, returnable by 5th AUGUST, from Hubert Bennett, F.R.I.B.A., Architect to the Council (EK/B/2028/7), County Hall, S.E.1.

CHICHESTER CITY.

APPOINTMENT OF BUILDING SURVEYOR AND PLANNING ASSISTANT.

Applications are invited for this appointment at a salary in accordance with A.P.T. Grade II (£815-£960). Candidates must have a thorough knowledge of Building Construction, Building By-laws, the Sections of the Public Health Acts relating to new buildings, drainage, etc., and development control under the Acts relating to Town and Country Planning, and must hold an appropriate qualification.

Consideration will be given to the payment of an essential user car allowance for a vehicle not exceeding 1,199 c.c.

The appointment will be in accordance with the National Scheme of Conditions of Service and terminable by one month's notice on either side.

Housing accommodation will be provided, if necessary, for the successful candidate.

Applications on forms, to be obtained from the City Surveyor at this address, must be returned to him not later than 11th AUGUST, 1961.

ERIC BANKS,
Town Clerk.

Greyfriars,
North-street,
Chichester.

DEWSBURY
COUNTY BOROUGH.

BOROUGH ARCHITECT AND BUILDING SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointments within the scope of the grades stated:—

(a) ASSISTANT ARCHITECT (EDUCATION SECTION), A.P.T. Grade IV (£1,140-£1,310 p.a.). Applicants should be A.R.I.B.A.

(b) QUANTITY SURVEYING ASSISTANT, A.P.T. Grade I (£645-£815 p.a.).

The provision of housing accommodation will be considered if required.

The appointments will be subject to one month's notice on either side and to the provisions of the Local Government Superannuation Acts.

Applications stating age, education, qualifications, full particulars of training and experience, together with copies of two recent testimonials, should be sent to the undersigned not later than WEDNESDAY, 2nd AUGUST, 1961, in envelopes endorsed "Appointment of ...."

A. NORMAN JAMES,
Town Clerk.

Town Hall,
Dewsbury.
8th July, 1961.

HUYTON-WITH-ROBY
URBAN DISTRICT COUNCIL.

APPOINTMENT OF BUILDING MANAGER.

Grade A.P.T. IV, £1,140-£1,310.

Applications are invited for the post of BUILDING MANAGER, from suitably qualified persons L.I.O.B. or equal.

The Building Manager will be responsible for the maintenance of 3,500 houses, 30 schools, Community Centres, Council Offices, etc., and for building houses and other public buildings by Direct Labour.

Applicants should have experience in the control of indoor and outdoor staff, a sound knowledge of builders' quantities, costing, bonus schemes and tendering in open competition.

Applications stating age, past and present appointments with salaries, experience in detail, giving number of staff controlled and the names and addresses of two referees, should be forwarded to the Architect and Housing Director, Huyton-with-Roby Urban District Council, "Grasscroft," Archway-road, Huyton, so as to be received not later than the 25th JULY, 1961.

Housing accommodation and car allowance available.

Canvassing disqualifies.

D. WILLGOOSE,
Clerk of the Council.

Council Offices,
Huyton.

MIDDLESEX
COUNTY COUNCIL.

PAINTER/DECORATOR required at Tylney Hall Residential School, Rotherwick, Nr. Basingstoke, Hants. Wages 5s. 2½d. per hr. 42-hr. week. Prescribed conditions. Full particulars and 2 referees to Chief Education Officer (Ref. GP/DB), 10 Great George-street, S.W.1, immediately. (Quote G.834 B.)

MALDEN AND COOMBE
BOROUGH.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointment: BUILDING INSPECTOR, Grade A.P.T. II (£815-£960 per annum, plus London "Weighting" and car allowance of £75 per annum). Preference will be given to candidates who possess the Building Inspector's Certificate of the Institution of Municipal Engineers. Forms of application may be obtained from John Arse, A.M.I.C.E., Borough Engineer and Surveyor, and should be returned, endorsed accordingly, by not later than MONDAY, 21st AUGUST, 1961.

HAROLD E. BARRETT,
Town Clerk.

Municipal Offices,
New Malden,
Surrey.

COUNTY BOROUGH OF STOCKPORT.

ARCHITECTS
QUANTITY SURVEYORS

Applications invited for the following appointments:-

SENIOR ARCHITECT, Scale 'B'—£1,405–£1,670

ARCHITECTS- A.P.T. Grades IV/V, £1,140–£1,480
A.P.T. Grades III/IV £960–£1,310
A.P.T. Grade II £815– £960
A.P.T. Grade I £645– £815

QUANTITY SURVEYORS- A.P.T. Grade V £1,310–£1,480
A.P.T. Grades IV/V £1,140–£1,480
A.P.T. Grades III/IV, £960–£1,310

Starting salaries will be at a point in the grades commensurate with experience and qualifications. This is a progressive office with a large programme of work. Previous local government experience not essential. Men or women of initiative and ability are required. Five-day week. 100% mortgage for house purchase considered in approved cases. Posts pensionable, subject to medical examination. Full particulars, stating age, qualifications, experience, two referees, and if related to members/senior officers of Council, to Borough Architect, Town Hall, Stockport, by 4th August, 1961. Canvassing disqualifies.

OLDHAM
COUNTY BOROUGH.

BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following posts:—

Education Section:

TWO ASSISTANT ARCHITECTS, A.P.T. IV (£1,140-£1,310).

ONE ARCHITECTURAL DRAUGHTSMAN, Misc. IV (£625-£685).

ONE BUILDING INSPECTOR, Misc. VI (£760-£825).

Housing or General Work:

TWO SENIOR ASSISTANT ARCHITECTS, A.P.T. V (£1,310-£1,480).

ONE ASSISTANT ARCHITECT, A.P.T. IV (£1,140-£1,310).

ONE ARCHITECTURAL DRAUGHTSMAN, Misc. V (£685-£760).

ONE QUANTITY SURVEYOR'S ASSISTANT, General Div. (£220-£630) according to age and qualifications, or A.P.T. I (£645-£815).

ONE CLERK OF WORKS, Misc. VI (£760-£825).

The newly formed Borough Architect's Dept. is in course of reorganisation and has a large programme of redevelopment and reconstruction. Some of these posts may, therefore, be considered for early promotion.

Applications giving details of age, qualifications and experience, together with names of two referees, should be forwarded to the Borough Architect, Town Hall, Oldham, and received not later than MONDAY, 7th AUGUST, 1961.

LEYTON
BOROUGH.
(In the County of Essex.)

COMMITTEE FOR EDUCATION.
APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

Applications are invited for the undermentioned appointments:—

ARCHITECTURAL ASSISTANT, Grade A.P.T. III, £960-£1,140 per annum plus London Weighting.

JUNIOR ARCHITECTURAL ASSISTANT, Grade A.P.T. I, £645-£815 per annum plus London Weighting.

The successful applicants will be employed by the Essex County Council and will work in the School Architect's Section of the Borough Engineer and Surveyor's Department, Town Hall, Leyton, E.10, five-day week is operated.

Details and forms of application from the Borough Education Officer, Education Offices, Kirkdale-road, Leytonstone, E.11, to whom they should be returned WITHIN 14 DAYS from the appearance of this notification.

STEVENAGE
DEVELOPMENT CORPORATION.

CHIEF ARCHITECT'S DEPARTMENT

A vacancy exists for an ASSISTANT QUANTITY SURVEYOR in the Chief Architect's Department, on New Towns' Salary Grade A.P.T. I/II (£645-£960), starting salary according to qualifications and experience.

The work is of a varied type, i.e. central development, industrial buildings, blocks of flats, housing, etc.

Living accommodation available in due course if necessary.

Applications, giving details of qualifications and experience and names of two referees, to be sent to the Chief Administrative Officer, Daneshill House, Danestrete, Stevenage, Herts., by FRIDAY, 28th JULY, 1961.

ILFORD
BOROUGH.

BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF SENIOR ASSISTANT ARCHITECT, GRADE A.P.T. V.

Candidates must be Associate Members of the R.I.B.A. and have suitable experience in the development of Council housing and multi-storey flats.

The commencing salary will be fixed within the scale £1,310-£1,480) according to qualifications and experience. London Weighting payable in addition. Five-day week.

The appointment will be subject to one month's notice on either side, to the provisions of the Local Government Superannuation Acts, to National Conditions of Service and to satisfactory medical examination.

THE COUNCIL IS PREPARED TO CONSIDER, IF NECESSARY, THE PROVISION OF HOUSING ACCOMMODATION.

Application forms, obtainable from the Borough Engineer, P.O. Box 7, Town Hall, Ilford, should be returned not later than TUESDAY, 8th AUGUST.

BUCKINGHAMSHIRE

EDUCATION COMMITTEE.
HIGH WYCOMBE COLLEGE OF FURTHER EDUCATION.
Principal: D. J. Everett, B.A., F.F.T.Com.

Applications are invited for the following post:—

BUILDING DEPARTMENT.

ASSISTANT, Grade B, to teach Brickwork to Advanced Craft Certificate level, duties to commence as soon as possible. Applicants must have suitable technical qualifications, preferably City & Guilds Brickwork and Higher National Certificate together with industrial and/or teaching experience. Ability to assist with the teaching of H.N.C. Building subjects will be an advantage.

Salary in accordance with the Burnham Further Education Report, viz. £700 x £27 10s. to £1,150, plus additions for approved qualifications and training.

Application forms and further particulars may be obtained from the Principal, College of Further Education, Queen Alexandra-road, High Wycombe, to whom completed forms should be returned WITHIN 14 DAYS of the appearance of this advertisement.

FARNHAM
URBAN DISTRICT COUNCIL.

BUILDING INSPECTOR.

Applications are invited for the above post from persons holding the Building Inspector's Certificate.

Salary will be within Grade A.P.T. II or III and will be determined having regard to qualifications and experience of the person appointed.

Housing accommodation will be provided, if required, and assistance given towards removal expenses.

Five-day week is in operation.

Applications, stating age, qualifications and experience, and salary required, together with the names of two referees, to be delivered to the undersigned by 10th AUGUST, 1961.

H. W. UNDERDOWN,
Clerk of the Council.

Council Offices,
South Street,
Farnham, Surrey.

NORTH EAST METROPOLITAN REGIONAL HOSPITAL BOARD
40 Eastbourne Terrace, London, W.2

W. G. Plant, Dip. Arch. (L'pool), F.R.I.B.A., *Regional Architect*

SENIOR ASSISTANT ARCHITECTS

required for the Board's expanding Architectural Department in London.

The Board is undertaking a considerable programme of Hospital Building, offering scope for research, imaginative design and progressive thinking, and excellent opportunities for gaining experience in a wide, varied and interesting field of Architecture. Major schemes on which the Board's staff are at present engaged include:

NEW HOSPITAL AT BASILDON
COMPLETE RE-DEVELOPMENT OF ORSETT HOSPITAL
MAJOR DEVELOPMENT OF BARKING HOSPITAL
MAJOR DEVELOPMENT OF SOUTHEND GENERAL HOSPITAL
MAJOR DEVELOPMENTS AT NORTH MIDDLESEX HOSPITAL

Salary commencing at £1,350, rising to £1,650 a year, inclusive.
Applicants must be Registered Architects having passed the requisite examinations. Those appointed will either by allocated jobs of their own and be responsible, under very limited supervision, for the schemes from sketch design to completion of contract, or will work, as members of teams, on the larger projects and share in the work of research, design and detailed drawings.

PREVIOUS HOSPITAL EXPERIENCE IS NOT ESSENTIAL
LEAVE—20 days, rising to 23 after 10 years.
Posts permanent and pensionable. 5-day week.
Mileage allowance paid for use of car on business.

Applications, giving age, details of education, professional training, qualifications, experience and past and present appointments (with dates), present salary and other relevant details, together with the names and addresses of two referees, should be sent to **The Secretary, North East Metropolitan Regional Hospital Board, 40, Eastbourne Terrace, London, W.2**, within 14 days.

GLASGOW CITY.
ASSISTANT ARCHITECTS.

The Architectural and Planning Department has a number of vacancies for qualified ASSISTANT ARCHITECTS.

The Department has in hand a large, varied and interesting programme of work, including Comprehensive Re-development, Multi-Storey Flats, Schools and Civic Buildings. The work will provide scope for personal initiative in the preparation of designs and details of schemes upon which construction work will follow.

The salary scale for these assistantships is up to £1,560 with placing according to experience.

A five-day week is in operation.

Advances up to 100 per cent of valuation will be made available, where needed, for the purchase of suitable houses in or near Glasgow, by successful applicants.

Form of application may be obtained from the Principal Administrative Officer, 20 Trongate, Glasgow, C.1.

A. G. JURY,
City Architect and Director of Planning.

WELSH
HOSPITAL BOARD.

Required in Architect's Department, situated near Civic Centre, ASSISTANT QUANTITY SURVEYORS.

Salary: £905-£1,310 per annum.

New entrants to the Health Service commence at £905 but the Board can grant a higher commencing salary where it is considered a candidate has relevant practical experience appropriate to the post to be filled.

Applicants must hold Corporate Membership of the Royal Institution of Chartered Surveyors. Duties will include: Preparation of Bills of Quantities and Final Accounts, and Site measurements and valuation for Interim Certificates on Architectural and Engineering projects throughout the Region. Candidates should have had good experience in this work.

Posts superannuable and a five-day week applies.

Applications stating age, education, qualifications, experience, present position and salary and names of two referees to be sent to the Secretary, Welsh Hospital Board, Temple of Peace and Health, Cathays Park, Cardiff, WITHIN 14 DAYS.

SHEFFIELD UNIVERSITY.

SURVEYOR.

Applications are invited for the post of SURVEYOR to the University.

Candidates must have a recognised professional qualification and may be architects, surveyors or engineers. They should possess wide experience of maintenance of buildings, plant and grounds, running of service installations, and carrying out minor works.

Commencing salary not less than £1,850 per annum, with F.S.S.U. benefits and child allowances.

Further particulars and forms of application can be obtained from the Bursar, Room D.25, The University, Sheffield, 10, to whom applications should be sent by 31st AUGUST, 1961.

GLOUCESTERSHIRE
COUNTY COUNCIL.

APPOINTMENT OF HEATING AND VENTILATING ENGINEERING ASSISTANT.

Applications are invited for the ABOVE APPOINTMENT within the range A.P.T. III (£960-£1,140) and A.P.T. IV (£1,140-£1,310) progressing to A.P.T. V (£1,310-£1,480) subject to satisfactory report on reaching appropriate increment(a) point in Grade IV.

Applicants must be Associate Members I.H.V.E. or hold Higher National Certificate (Mech. Eng.) with five years' experience in Heating and Ventilation.

Consideration will be given to suitably experienced Associate Members of I.H.V.E. for appointment commencing within range of Grade IV, otherwise in Grade III.

Applications stating age, present position, salary and date of appointment, details of experience and previous appointments, together with the names and addresses of two persons for reference, to reach County Architect, Shire Hall, Gloucester, by 9th AUGUST, 1961.

GUY H. DAVIS,
Clerk of the County Council.

BASILDON
URBAN DISTRICT COUNCIL.

(Population 90,000—27,000 acres—Rapidly Developing District.)

(a) CLERK OF WORKS—BUILDING (TEMPORARY)—£14 14s. per week.

(b) DRAUGHTSMAN OR DRAUGHTSWOMAN (ESTABLISHED) Within Miscellaneous IV-V (£625-£760 p.a.).

Applicants for (a) should have had experience in the supervision of building works, particularly house construction and for (b) be competent and expeditious draughtsmen or draughtswomen, preferably with experience of Civil Engineering drawing.

A car allowance on a casual user basis, now 9d. per mile, is payable in respect of position (a).

Particulars and forms from Engineer and Surveyor, 88 Town-square, Basildon, Essex. Closing 5th AUGUST.

HAYES AND HARLINGTON
U.D.C.

require

BUILDING CLERKS OF WORKS.

Salary within Miscellaneous Grade VI, i.e. £760-£825 p.a. plus London "weighting." Candidates must have a sound, practical and up-to-date knowledge of all building trades, be capable of keeping records, submitting reports and measuring up work in progress. Subject to satisfactory service the person appointed will be transferred from job to job. A continuing programme of work is anticipated. Working hours related to those of Contractor which normally attracts payment at overtime rates. No housing accommodation available. Further particulars, form of application etc., available from the undersigned, which when completed must be returned by 9th AUGUST, 1961.

GEORGE HOOPER,
Clerk and Solicitor.

Town Hall,
Hayes,
Middlesex

WALTHAMSTOW
BOROUGH
BOROUGH ARCHITECT'S DEPARTMENT.

Walthamstow is a municipal borough within the County of Essex, population 108,788, rateable value £1,788,707. It is a progressive authority and there is a large programme of interesting work to be undertaken including multi-storey flats, commercial development and industrial buildings.

Applications are invited for the following permanent appointment:—

ONE ASSISTANT QUANTITY SURVEYOR, Grade A.P.T. II (£815-£960 per annum, exclusive of London Weighting).

Applicants should have the appropriate qualifications and the commencing salary will be according to experience.

The Council is prepared to make a 100 per cent. advance to the successful applicant for House Purchase within the Borough or in adjoining Boroughs.

Application forms, obtainable from the Borough Architect, Town Hall, Walthamstow, E.17, must be returned to the undersigned by NOON on FRIDAY, 4th AUGUST, 1961.

G. A. BLAKELEY,
Town Clerk.

Town Hall,
Walthamstow, E.17.
13th July, 1961.

CARDIGANSHIRE
COUNTY COUNCIL.

Applications are invited for the undermentioned vacancies in the County Architect's Department, County Hall, Aberayron.

(a) ARCHITECTURAL ASSISTANTS, A.P.T. Grade II (£815-£960).

(b) ARCHITECTURAL ASSISTANT, General Division (£220-630).

The appointments are superannuable and subject to medical examination.

Applicants for (a) should have passed the Intermediate Examination for Associateship of the Royal Institute of British Architects and applicants for (b) should have had experience in an Architect's Office.

The Council cannot offer the appointed person any housing accommodation, but a lodging allowance of 35s. per week for a period of up to 6 months, and half reasonable removal expenses will be paid to the successful married applicant.

Forms of application and further details obtainable from the County Architect, County Hall, Aberayron, Cards.

Applications are to be returned to the undersigned by not later than FRIDAY, 11th AUGUST, 1961.

J. E. R. CARSON,
Clerk of the Cardiganshire County Council.

Swyddfa'r Sir,
Aberystwyth,
Cards.
12th July, 1961.

CHESTERFIELD
BOROUGH.

Applications are invited for a SENIOR ARCHITECT within Grade A.P.T. IV/V (£1,140-£1,480) in the Borough Engineer's Department (C. Bond, F.R.I.B.A., Chief Architect). The commencing salary will depend on qualifications and experience.

A car allowance is payable and housing accommodation will be provided if required. A five-day week is in operation.

A substantial programme of capital works is envisaged which includes a swimming bath, highways depot, library and multi-storey flats.

Chesterfield, which has a population of about 70,000, is situated bordering the Peak District National Park.

Applications, stating age, qualifications, training and experience, naming two referees, to the Borough Engineer, Town Hall, Chesterfield, not later than MONDAY, 31st JULY, 1961.

RICHARD CLEGG,
Town Clerk.

STAFFORDSHIRE
COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT.
VACANCIES:

ASSISTANT ARCHITECTS, £1,310-£1,480; £1,140-£1,310.

ASSISTANT QUANTITY SURVEYORS, £1,140-£1,310.

ASSISTANT STRUCTURAL ENGINEER, £1,140-£1,310.

The Architect's Department is a busy and expanding office, dealing with a wide variety of projects, including Fire Stations, Colleges, Schools, Police Stations, Offices, Ambulance Stations, Clinics, Libraries, etc.

Good working conditions, assistance with removal expenses, etc. There is a scheme for loans to employees wishing to purchase their own houses.

Forms of application from P. Woodcock, F.R.I.B.A., County Architect, Green Hall, Lichfield-road, Stafford. Closing date 31st JULY, 1961.

T. H. EVANS,
Clerk of the County Council.

LONDON
COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

RESIDENT ENGINEER required immediately for Extensions to the Royal Festival Hall. Experience in supervision of reinforced concrete structure on the site desirable, but those with adequate knowledge and experience of design alone will be considered.

Candidates should have B.Sc.(Eng.), A.M.I.C.E. or A.M.I.Struct.E. Up to £1,250 according to qualifications and experience. Forms, returnable by 12th AUGUST, from Hubert Bennett, F.R.I.B.A., Architect to the Council (EK/B/2003/7), County Hall, S.E.1.

STOKE NEWINGTON
BOROUGH.

APPOINTMENT OF ASSISTANT ARCHITECT.
(A.P.T. IV, £1,140 to £1,310 plus £45 L.W.)

Applications are invited for the above appointment in the Architectural Section of the Department. Applicants must be Associate Members of the R.I.B.A. with at least three years' experience since qualifying. A contemporary outlook with first-class ability in design and construction is essential.

The present work of the department includes multi-storey flats and public buildings, together with design of a new swimming bath.

Housing accommodation cannot be provided.

Forms of application obtainable from me and returnable not later than 15th AUGUST.

A. J. HAZAEL,
Town Clerk.

Town Hall,
Stoke Newington Church-street,
London, N.16.

SWINDON
BOROUGH.

JUNIOR ASSISTANT QUANTITY SURVEYORS.

Applications are invited for posts of JUNIOR ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade II (£815-£960 per annum) and A.P.T. Grade I (£645-£815 per annum).

Applicants must have passed the Intermediate R.I.C.S. or equivalent examination.

Housing accommodation and assistance with removal expenses may be offered.

Applications, on forms to be obtained from the Town Clerk, Civic Offices, Swindon, must be returned by 5th AUGUST, 1961.

FULHAM
METROPOLITAN BOROUGH.

BOROUGH ARCHITECT'S AND HOUSING DEPARTMENT.

CLERKS OF WORKS for (i) multi-storey block Library, Civil Defence Headquarters and Housing; (ii) Baths, Public Laundry and Library, and (iii) multi-storey Housing. Experienced reinforced concrete, new materials and finishings. Salary according to experience in range £19-£23 per week. Duration of work two years in first instance.

Application forms, to be returned by 9th AUGUST, from Town Clerk, Town Hall, Fulham, S.W.6.

AIR MINISTRY

require SENIOR WORKERS UP in Quantities Division in London. Salary which is dependent on age, qualifications and experience ranges from £1,043 to £1,188 (max.) on annual incremental basis. Five-day week with three weeks three days' paid leave a year initially. Some promotion and pension prospects. Qualifications: Applicants, who must be natural born British Subjects, should hold O.N.C. or C. and G. (Quantities) or equivalent and be fully competent to work up entire bills of quantities. Financial assistance and time off allowed for recognised courses of study leading to higher qualifications. Forms from Manager (PE 519), Ministry of Labour, Professional and Executive Register, Atlantic House, Farringdon-street, London, E.C.4. Candidates selected will normally be interviewed in London and certain expenses reimbursed. Only applicants selected for interview will be advised.

GREAT YARMOUTH
COUNTY BOROUGH.

EDUCATION COMMITTEE.
SCHOOLS' ARCHITECT'S DEPARTMENT.

Applications are invited from Associate Members of the R.I.B.A. for the appointment of a SENIOR ASSISTANT ARCHITECT at a salary with A.P.T. IV (£1,140 to £1,310) to work on an interesting and progressive programme.

Previous experience with Local Government not essential.

Housing accommodation will be available to the successful candidate if married and assistance with removal expenses may be made in suitable cases.

Full details of present and past appointments, age, qualifications and experience, together with the names of two referees should reach the Schools Architect, 22 Euston-road, Great Yarmouth by 11th AUGUST, 1961.

D. G. FARROW,
Chief Education Officer.

22, Euston-road,
Great Yarmouth,
Norfolk.

JARROW
BOROUGH.

Applications are invited for the appointment of **CHIEF ASSISTANT ARCHITECT** in the Borough Engineer's Department. The salary to be within Grade A.P.T. IV-V (£1,140-£1,480 per annum) according to experience. Applicants to be **A.R.I.B.A.** or **equivalent.**

Further details and application forms obtainable from the Borough Engineer, Town Hall, Jarrow, Co. Durham.

Applications must reach the undersigned by WEDNESDAY, 9th AUGUST, 1961.

M. L. ROTHFIELD,
Town Clerk.

Town Hall,
Jarrow.

PLANNING AND REBUILDING FOR THE NEW LONDON

There is a unique opportunity to combine public service with the highest possible professional standards for architects, architect/planners, structural engineers, building, quantity and planning surveyors, in the Architect's Department of the London County Council.

District Surveyors' Service—Structural engineers and building surveyors needed.

Modernisation, Adaptation, Rehabilitation—Architects and building surveyors needed.

New Building Programme—Architects and assistants needed to work on housing, schools, South Bank Development, hostels, old people's homes and architectural works associated with road improvements.

Planning of London—Architect/Planners and planning surveyors needed. Development Plan, Development Control and Civic Design, including redevelopment arising from new Roads programme.

Structural Engineering Division—Structural engineers needed for design.

Quantities Division—Quantity surveyors, surveyors for cost planning and workers-up needed.

Voluntary Schools Section—Architectural assistants and building surveyors needed for work on church schools including the initiation of schemes, improvements and maintenance.

Building Regulation Division—Architects and building surveyors needed to examine applications to build, to deal with factory fire arrangements and to help with a campaign to eliminate the danger spots in London where fire risk is high.

Have you thought of joining the L.C.C.?

Whatever changes may result from the Royal Commission Report an enormous programme of work will have to be done and service with the L.C.C. now provides the best training ground for opportunities in the future.

■ Promotion strictly on merit ■ Flexible salary reviews within grades ■ Permanency after probationary service ■ Recognition grants for outstanding work ■ Starting salaries up to £1,500 according to quality and experience.

Please apply for application forms and further particulars to Hubert Bennett, F.R.I.B.A., Architect to the Council, County Hall, S.E.1, quoting reference EK/1943/7.

BASINGSTOKE, HAMPSHIRE

47 miles W.S.W. of London
18 miles N. of Winchester
40 miles N.W. of Chichester
17 miles S. of Reading
35 miles N.E. of the New Forest
35 miles from the coast

TOWN EXPANSION

You are invited to apply for an appointment in the newly-formed technical group who are to draft and carry out a scheme for the expansion of Basingstoke from its present population of 25,000 to 75,000 by 1975.

The Group will be organised on a team basis to deal with a wide variety of tasks, ranging from the preparation of basic development plans to the comprehensive redevelopment of the Central Area, and all tasks will be arranged within strict time schedules.

Candidates for the following posts, who should hold either architectural or planning qualifications, will be judged on their design ability, experience and general architectural outlook. Gradings and commencing salaries to be within the ranges indicated, according to qualifications and experience. Those who are successful will be appointed to the staff of the Hampshire County Council and will work under the direction of the Chief Architect/Planning Officer for Basingstoke, Alan G. McCulloch, A.R.I.B.A., A.M.T.P.I.

General Planning

Senior Architect/Planning Officer—Scale D-F (**£1,710-£2,345**)
Assistant Architect/Planning Officers—Scale A-C (**£1,480-£1,825**)

Central Area

Senior Architect/Planning Officer—Scale D-F
Assistant Architect/Planning Officers—Scale A-C

Also for:

Junior Assistants and Draughtsmen—A.P.T. Grades I-IV (**£645-£1,310**)

The posts are pensionable. Separation allowance and assistance with removal expenses will be paid in approved cases.

Applications, stating full details of age, education, qualifications and experience, including present grade and salary, and accompanied by a copy of one testimonial and the names of two referees, should reach the **Clerk of the County Council, The Castle, Winchester, by 8th August, 1961.**

FAREHAM
URBAN DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications invited for ASSISTANT QUANTITY SURVEYOR in above Department. Salary in A.P.T. Grade II (£815-£960). Housing accommodation may be provided. Car allowance on essential user's scale (for 10 h.p.). N.J.C. Conditions and Superannuation Schemes apply.

Applicants must be suitably qualified by examination and had experience in preparation of Bills of Quantities, measurements for certificates, etc., on schemes carried out for Housing Estates and other Council Buildings and maintenance works.

Applications stating age, qualifications, full details of experience together with names and addresses of TWO referees to undersigned by 3rd AUGUST, 1961.

B. W. RANDS,
Clerk to the Council.

"Merton,"
5 Grove-road,
Fareham,
Hants.

GLOUCESTERSHIRE
COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

(a) ASSISTANT ARCHITECT—"CAREER CLASS," commencing in A.P.T. IV (£1,140-£1,310 p.a.) progressing to A.P.T. V (1,310-£1,480 p.a.) subject to satisfactory report on reaching appropriate incremental point in Grade. Applicants must be Registered Architects and Associate Members of the R.I.B.A.

(b) ARCHITECTURAL ASSISTANTS—"QUALIFYING CLASS." Vacancies exist in the following grades:—

A.P.T. I. Salary £645- £815 p.a.
A.P.T. II. Salary £815- £960 p.a.
A.P.T. III. Salary £960-£1,140 p.a.
A.P.T. IV. Salary £1,140-£1,310 p.a.

Applicants for posts in Grades I and II should have passed the Intermediate Examination of the R.I.B.A., and for Grades III and IV the full R.I.B.A. Final Examination.

N.J.C. Conditions of Service; superannuation; medical examination.

Applications, stating age, present position and salary, details of previous appointments, together with the names and addresses of two persons for reference, must reach the County Architect, Shire Hall, Gloucester, by 11th AUGUST, 1961.

GUY H. DAVIS,
Clerk of the County Council.

HEMEL HEMPSTEAD
DEVELOPMENT CORPORATION.

VACANCY NO. 61.

Applications invited for CLERK OF WORKS. Salary scale £815-£915. Starting salary in accordance with experience and qualifications. Applicants should be experienced in the supervision of building works of all types, particularly large housing contracts, and should have a basic trade of carpenter, bricklayer or plumber.

Housing accommodation may be available.

Conditions of service similar to Local Government. Superannuation scheme.

Applications endorsed "Vacancy No. 61," stating age, qualifications and experience, with names of two previous employers to reach General Manager, Westbrook Hay, Hemel Hempstead, by 28th JULY.

CARDIFF CITY.

CITY ARCHITECT'S DEPARTMENT
APPOINTMENT OF
ASSISTANT ARCHITECT.
A.P.T. GRADE III/IV, £960-£1,310.

Applications are invited for the appointment of an ASSISTANT ARCHITECT, A.P.T. Grade III/IV, £960-£1,310 per annum, the point of entry in the grades subject to qualifications and experience.

General Conditions of Appointment may be obtained from the undersigned.

Applications, stating age, qualifications, details of experience and the names of two persons to whom reference can be made should be delivered to me not later than the 31st JULY, 1961.

S. TAPPER JONES,
Town Clerk.

City Hall,
Cardiff.
July, 1961.

STOKE NEWINGTON
METROPOLITAN BOROUGH.

SENIOR ESTIMATOR required in Borough Engineer's Department, Metropolitan Borough of Stoke Newington. Salary range £1,140 to £1,310 plus £45 L.W.

Candidates must have a wide experience of the building trade and be capable of handling the Estimator/Surveyor's work from competitive Tender stage to completion of work and settlement of final account with quantity surveyors.

Housing accommodation not provided.

Applications in writing, stating age, present and previous positions, experience, etc., to Town Clerk, Town Hall, Stoke Newington Church-street, N.16, by WEDNESDAY, 2nd AUGUST, 1961.

CAMBRIDGE
UNIVERSITY.

University of Cambridge, Department of Estate Management (Architectural Section), require a fully qualified ARCHITECT with at least five years' experience in the office of a practising architect. The successful candidate will be appointed within Grade II of the Department's Staff Grading Scheme, Salary Scale £1,150 x £50—£1,350 plus family allowance £50 per child and pension rights. Work of a varied and interesting nature dealing mainly with University and College buildings. Applications, giving full details regarding age, experience and present salary, with copies of three recent testimonials, to The Director, 74 Trumpington-street, Cambridge, not later than FIRST POST 29th JULY, 1961.

LEYTON
BOROUGH.

Applications invited for appointment to established post of SENIOR PLANNING ASSISTANT in Borough Engineer's Department. Salary within Grade A.P.T. III of National Joint Council's Scheme, viz. £960-£1,140 per annum, plus London Weighting. Housing accommodation will be made available to successful applicant and the appointment carries an "essential user" car allowance for vehicle not exceeding 10 h.p. or 1,199 c.c.

N.J.C. Conditions of Service. Five-day week. Staff canteen available.

Apply by letter with details of age, experience and names, etc., of two referees, to reach the Borough Engineer, Town Hall, Leyton, E.10, not later than 28th JULY, 1961.

D. J. OSBORNE,
Town Clerk.

Town Hall,
Leyton, E.10.

WEST HAM
COUNTY BOROUGH.

Vacancies exist for a number of SENIOR ASSISTANT ARCHITECTS, J.N.C. Scale "A" £1,400-£1,565 p.a. and for an ARCHITECTURAL ASSISTANT, in the salary range £645-£1,140 p.a. (and London Allowance), according to qualifications and experience.

An expanded programme of work, including numerous official buildings, Fire Stations, Primary and Secondary Schools, high density housing and town Centre Redevelopment Scheme, is on hand.

Applications, with details of qualifications and experience (together with names of two referees), to be addressed to Thomas E. North, O.B.E., F.R.I.B.A., Dist. T.P., M.T.P.I., Borough Architect and Planning Officer, 70 West Ham-lane, Stratford, E.15.

WEST SUSSEX
COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of an ASSISTANT HEATING AND HOT WATER ENGINEER-DESIGNER-DRAUGHTSMAN, at a salary in accordance with Grade III (A.P.T. Division, £960-£1,140 per annum) of the National Scales of Salaries. Commencing Salary according to experience.

Further particulars should be obtained from the County Architect, County Hall, Chichester, to whom detailed applications must be submitted not later than 9th AUGUST, 1961.

T. C. HAYWARD,
Clerk of the County Council.

County Hall,
Chichester.

LEYTON
CORPORATION.
(Municipal Borough in Essex. Population approximately 100,000.)

Applications invited for appointment of ASSISTANT ARCHITECTS. Salary within Grade A.P.T. III, £960-£1,140 per annum plus London Weighting.

Housing accommodation will be provided, 5-day week, National Joint Council Conditions of Service.

A large and varied programme of architectural and building works in hand and projected offers good opportunities of gaining experience.

Applications to Borough Engineer, Town Hall, Leyton, E.10, not later than 5th AUGUST, 1961.

D. J. OSBORN, Town Clerk.

Town Hall, Leyton, E.10.

ARCHITECTS AND MAINTENANCE SURVEYORS.

Pensionable posts for men and women at least 25 and under 35 on 1.1.61 (extension for regular Forces service, Overseas Civil Service, established civil service and temporary Government service as Architect or Maintenance Surveyor). Candidates must be registered Architects or, alternatively, for Maintenance Surveyor posts, have achieved Corporate Membership of R.I.C.S. (Building Section), or have passed examinations necessary for attaining Corporate Membership. National salary £936-£1,258 according to age, rising to £1,430. Promotion prospects. Write Civil Service Commission, 17 North Audley-street, London, W.1, for application form quoting S/69-61.

EAST RIDING OF YORKSHIRE
COUNTY COUNCIL.

Applications are invited for the appointment of RESIDENT CLERK OF WORKS to supervise the erection of proposed County Secondary Schools at Fulford and Norton.

The salary will be at the rate of £16 7s. 6d. per week and the Council will provide a second-class rail or omnibus contract ticket between approved places of residence and the sites.

Applications giving particulars of age, qualifications, experience, past and present appointments with salaries, and the names of three referees should be sent to the County Architect, County Hall, Beverley, not later than SATURDAY, 29th JULY, 1961.

THOMAS STEPHENSON,
Clerk of the County Council.

PORTSMOUTH CITY.

CITY ENGINEER'S DEPARTMENT.

Applications are invited from persons capable of making measured drawings of buildings, for appointment as ASSISTANT BUILDING SURVEYORS in connection with Means of Escape in Case of Fire. Candidates should be quick and accurate draughtsmen, preferably with a good knowledge of building construction.

There are two posts, which are permanent and superannuable. Salary £815-£960 per annum.

Full personal details to City Engineer, 1 Clarence-parade, Portsmouth, by MONDAY, 31st JULY, giving names and addresses of two referees.

Canvassing will disqualify.

TOTTENHAM
BOROUGH.

Applications are invited for an established post of

ESTIMATING AND COSTING SURVEYOR,

in the Borough Engineer and Surveyor's Department.

A.P.T. Grade II—£815 to £960 per annum. London Weighting allowance of £25 or £40 per annum payable in addition and commencing salary according to experience and ability.

Application form and Conditions of Appointment, which should be returned not later than 14th AUGUST, 1961, are obtainable from the Borough Engineer and Surveyor (B), Town Hall, Tottenham, N.15.

M. LINDSAY TAYLOR,
Town Clerk.

EAST SUSSEX
COUNTY COUNCIL.

CLERK OF WORKS.

Applications are invited for the appointment of a CLERK OF WORKS from persons having wide experience in the building trade to supervise extensions to the Haywards Heath County Secondary School and extensions to Halsford Park East Grinstead Old People's Home.

The appointment will be for a period of at least two years. Salary £16 per week, plus fares or car allowance from home to sites.

Applications, stating age, qualifications and experience to County Architect, County Hall, Lewes, not later than 31st JULY, 1961.

LONDON TRANSPORT.

TECHNICAL ASSISTANT (QUANTITY SURVEYING) or TRAINEE QUANTITY SURVEYOR required for Works and Building Office, to undertake site measuring, estimating and working-up bills of quantities for maintenance work.

Salary range £460 at age 20 rising to £850. Commencing salary up to £790, dependent upon age. Extra payments for certain recognised qualifications. 38-hour week; valuable free travel; medical examination; contributory superannuation scheme.

Apply to Staff and Welfare Officer (Ref. 622/2), London Transport, 55 Broadway, S.W.1.

CLERK OF WORKS.

OFFICERS' MESS AND MINOR WORK AT PARSONS BARRACKS, DONNINGTON C.O.D., SALOP

Applications are invited for an appointment in connection with the above work.

The salary payable will be £800-£988 per annum according to experience. The appointment is for the duration of the contract, which will be about one year.

Full particulars of previous experience and references, together with the names of three persons (one or more of whom should be an architect) to whom further reference can be made, should be sent by JULY 29th, 1961, to Jackson & Edmonds, Architects, 116 Colmore-row, Birmingham, 3.

LAMBETH
BOROUGH COUNCIL.

HOUSING DEPARTMENT.

Vacancies exist for ARCHITECTURAL ASSISTANTS within the salary range £840-£1,525 per annum. Interesting new work includes multi-storey flats, maisonettes, houses, shops, public library, depots, etc.

Applications in the first instance by letter to the Town Clerk, Town Hall, Brixton, S.W.2. Closing date 28th JULY, 1961.

A job for the expert

Skill and experience are essential in your job—and vital qualities too where Insurance is concerned. You get both—and more—with a

MIDLAND EMPLOYERS' LIABILITY POLICY

Offering complete protection with a ● **Unique No Claim Bonus** ● **Free Legal Defence** and a ● **Free Accident Prevention Survey Service.**

Talk business with the EXPERTS

MIDLAND EMPLOYERS' MUTUAL ASSURANCE LTD

Head Office: MIDLAND ASSURANCE BUILDING
Hagley Road, Birmingham 16
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As official Insurers to certain Building and Allied Trades Associations, Special Terms are available to members

The light bucket for the HEAVY job...

- Made of heavy section rigid polythene for great strength but pliable enough for easy cleaning and safety.
- Light in Weight (just over 3 lb)
- Rustless, corrosion-proof and unbreakable.
- Extra strong galvanized steel handle
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Colour: **BLACK**. Capacity 3 gall.

Ideal for factories, building sites, garages, gardens and all heavy duty applications.

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Eastern Electricity

NORTHMET SUB-AREA

General ASSISTANT ENGINEER

(Engineering Draughtsman),

Civil Engineering & Building Section,
Sub-area Engineer's Department

(Ref. 1075)

Candidates should be capable of preparing plans, estimates and detailed drawings associated with Civil Engineering and Building Works.

Possession of an Ordinary National Certificate or equivalent qualification is desirable.

Salary.—N.J.B. Class N, Grade IB (£815–£920) including London Allowance.

Apply by letter to the

Manager, Eastern Electricity Board,
Northmet Sub-area, Northmet House,
Southgate, London, N.14

by 31st July, 1961.

FULHAM
METROPOLITAN BOROUGH.

BOROUGH ARCHITECT'S AND HOUSING DEPARTMENT.
CLERKS OF WORKS for (i) multi-storey block Library, Civil Defence Headquarters and Housing; (ii) Baths, Public Laundry and Library, and (iii) multi-storey Housing. Experienced reinforced concrete, new materials and finishings. Salary according to experience in range £19-£23 per week. Duration of work two years in first instance. Application forms, to be returned by 9th AUGUST, from Town Clerk, Town Hall, Fulham, S.W.6.

BARKING
CORPORATION.

DEPARTMENT OF THE BOROUGH ARCHITECT.
QUANTITY SURVEYING ASSISTANT.
(Salary £1,005 to £1,185 per annum.)
The above vacancy exists in the quantity surveying section of this department which has on hand a large and varied programme of housing and education work.
Written applications should reach the undersigned WITHIN SEVEN DAYS of the appearance of this advertisement.

E. R. FARR,
Town Clerk.

Town Hall,
Barking.

LINCOLN
COUNTY.

PARTS OF KESTEVEN.
COUNTY ARCHITECT'S DEPARTMENT.
ENGINEER'S ASSISTANT (HEATING).
A.P.T. Grade II (£815-£960).
Full particulars of the above appointment may be obtained from the County Architect, County Offices, Sleaford, Lincs.
Applications from suitably qualified persons, together with the names and addresses of two referees, should reach the undersigned not later than the 3rd SEPTEMBER, 1961.

J. E. BLOW,
Clerk of the County Council.

County Offices,
Sleaford,
Lincs.

BEDFORDSHIRE
COUNTY COUNCIL.

APPOINTMENT OF AREA PLANNING OFFICER.
J.N.C. SCALE A.B.
Applications are invited from Chartered TOWN PLANNERS for the post of AREA PLANNING OFFICER for the southern area of the County. This post has recently been upgraded to J.N.C. A/B (£1,315-£1,670) to take into account increased responsibilities. Further particulars and application forms from Establishment Officer, Shire Hall, Bedford. Closing date 10th AUGUST.

EAST HAM
COUNTY BOROUGH.

SENIOR ASSISTANT ARCHITECT.
A.P.T. IV, £1,185-£1,355.
Salary in excess of the minimum may be paid according to qualifications and experience. A subsistence allowance may be granted over a reasonable period to the person appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.
Further details and application forms returnable by 4th AUGUST, 1961, from the Town Clerk, Town Hall, E.6.

MANCHESTER
REGIONAL HOSPITAL BOARD

invite applications from qualified mechanical and/or heating and ventilating engineers for the post of MAIN GRADE ENGINEER. Salary scale £910 x £35 (1) x £40 (2) x £45 (5) x £50 (7)—£1,600. National Health Service conditions and superannuation scheme. Application forms obtainable from the Secretary, Manchester Regional Hospital Board, Cheetwood-road, Manchester, 8, to whom they should be returned by 12th AUGUST, 1961.

HOUSING DEPARTMENT

ACCOUNTS CLERK required in Maintenance Section for checking contractors accounts, building costs, interim payments, etc. Clerical Grade II, £710-£815. Apply in writing to the Director of Housing, 1 Clarence-parade, Southsea, giving full details and the names of two referees by 1st AUGUST, 1961.

HESTON AND ISLEWORTH
BOROUGH.

APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT.
Applications are invited for the permanent appointment of a SENIOR ARCHITECTURAL ASSISTANT in the Borough Engineer and Surveyor's Department. Salary in accordance with A.P.T. Grade IV (£1,140-£1,310 plus London "Weighting").
Applicants must have had good experience in architectural design and building work under construction, and, other things being equal, preference will be given to applicants who have passed the examination for Associate R.I.B.A. or hold a University Degree or Diploma in architecture accepted by that Institute.
The Council is unable to assist the successful candidate with housing accommodation.
Applications are to be submitted by 31st JULY, 1961, on forms to be obtained from and returned to the Borough Engineer and Surveyor, 88 Lampton-road, Hounslow.

D. MATHIESEN,
Town Clerk.

Town Hall,
Hounslow,
Middlesex.

WIGAN
COUNTY BOROUGH.

BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF CLERKS OF WORKS.
Applications are invited for the appointment of TWO TEMPORARY CLERKS OF WORKS to serve in the Architectural Section of the Borough Engineer's Department. Salary Miscellaneous Classes of Officers Grade VI (£760-£825).
Applicants should be able to set out, measure up, keep records, make reports and supervise all classes of buildings.
Applications, giving name, address, age, present appointment and salary, previous appointments, and also copies of two recent testimonials, should be sent to the Borough Engineer and Surveyor, Municipal Buildings, Wigan, to be received by him by no later than FRIDAY, 29th JULY, 1961.

ALLAN ROYLE,
Town Clerk.

Municipal Buildings,
Wigan.

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COPPER FOR ROOFING IN ALL WIDTHS UP TO 27" AND ALL GAUGES DOWN TO AND INCLUDING ·004".

J. F. RATCLIFF (METALS) LTD.
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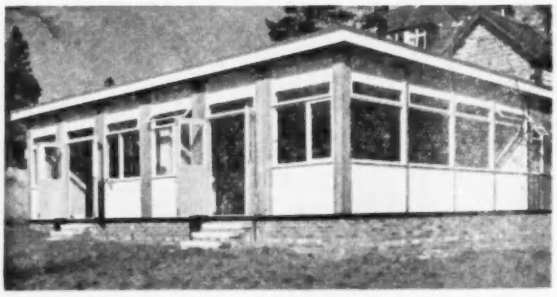

Contemporary or Traditional

PEEL'S
Prefabricated Buildings

Whether you require a class room, a sports pavilion or a building extension PEELS can meet your requirements with a prefabricated building from their vast range or with a design exactly to your specification. This beautifully designed class room at a school in North Yorkshire is an example of PEELS prefabricated buildings.

H. Peel Limited, Dept. B,
Sowerby Bridge, Halifax. Tel: Halifax 81211.

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available for the first time

. . . the famous

Bedford light van with diesel power

FIRST CHOICE FOR THE HIGH MILEAGE OPERATOR

THE NEW Bedford diesel vans now join the famous family of petrol-engined models. Power unit is the well-proved Perkins 4.99 diesel—simple, dependable, economical. This modern, high-speed diesel develops maximum power at 3,600 r.p.m.; presents a lively turn of speed, first class acceleration and hill-climbing.

It is installed on the Bedford assembly line as a regular production unit, and prices thus reflect the economies made possible by large volume manufacture. First-class service and low-price parts are available everywhere through Bedford dealers. Ask your local Bedford dealer for full details and a demonstration.

Better buy Bedford

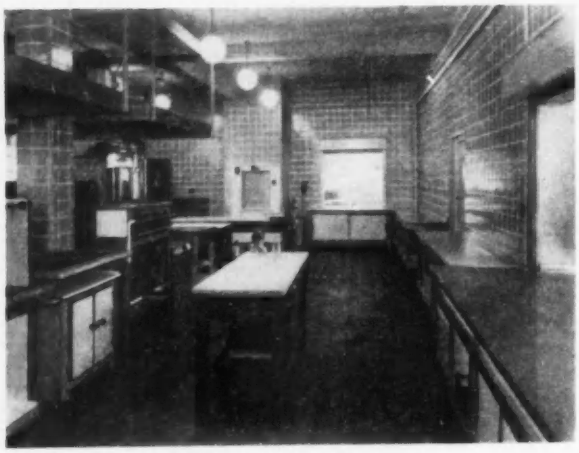
Vauxhall Motors Limited, Luton, Bedfordshire.

Top value for money in dependable diesel transport.

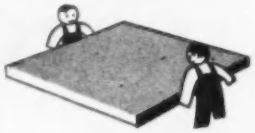
	10/12 cwt.	15 cwt.
90″ wheelbase chassis	£480	£490
102″ wheelbase chassis	£490	£500
90″ wheelbase van	£580	£590
102″ wheelbase van	£600	£610

200,000 × 8 years proof. Behind the new Bedford diesel is the reliability that comes from building more than 200,000 petrol-engined vans to a sound basic design developed and improved over 8 years.

All prices include spare wheel and tyre.



Photograph by courtesy of Richard Lloyd Ltd., Birmingham. Tiling contractors: Midland Tile Co. (Stourbridge) Ltd. and William Weaver (Bromsgrove) Ltd



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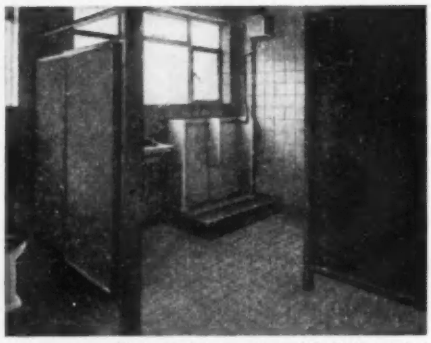

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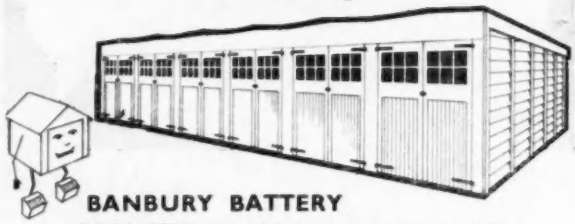

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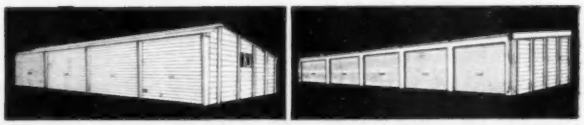

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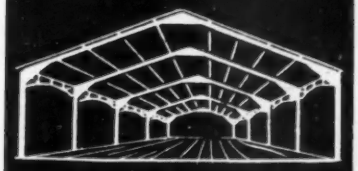
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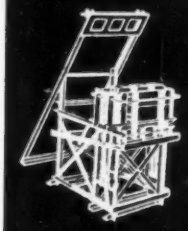
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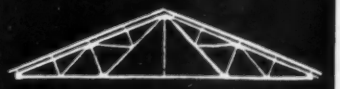
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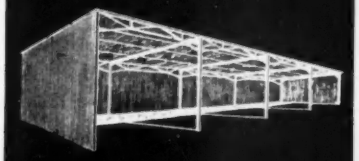
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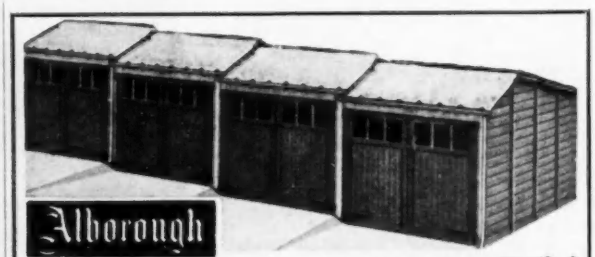

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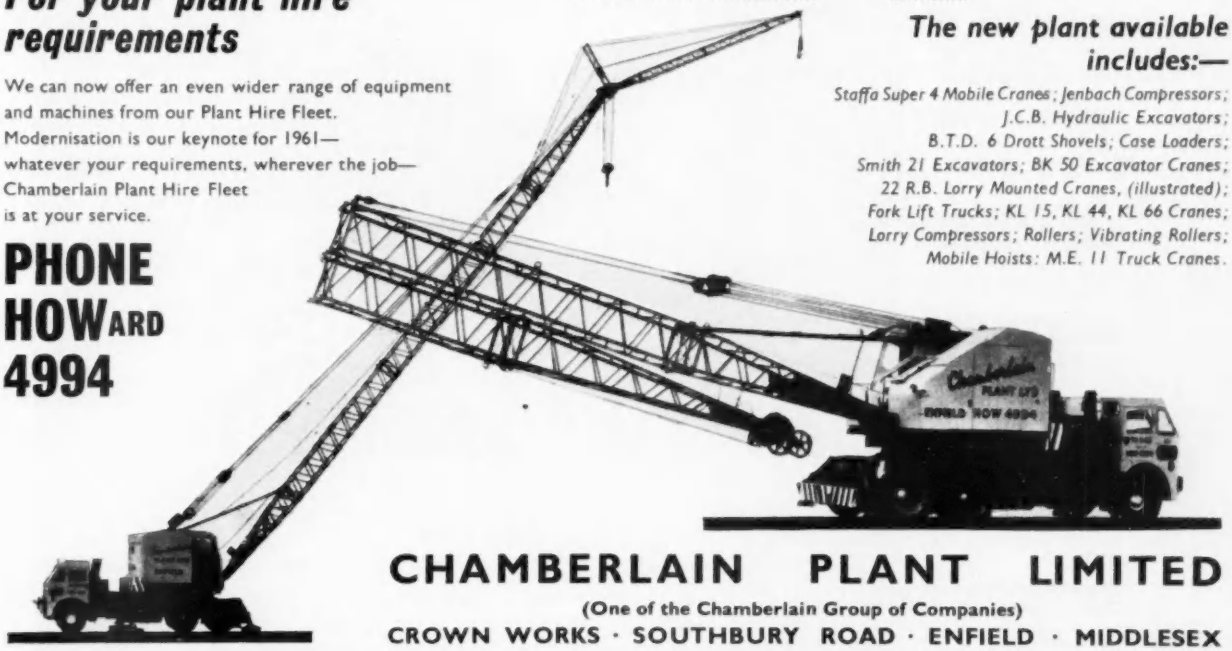

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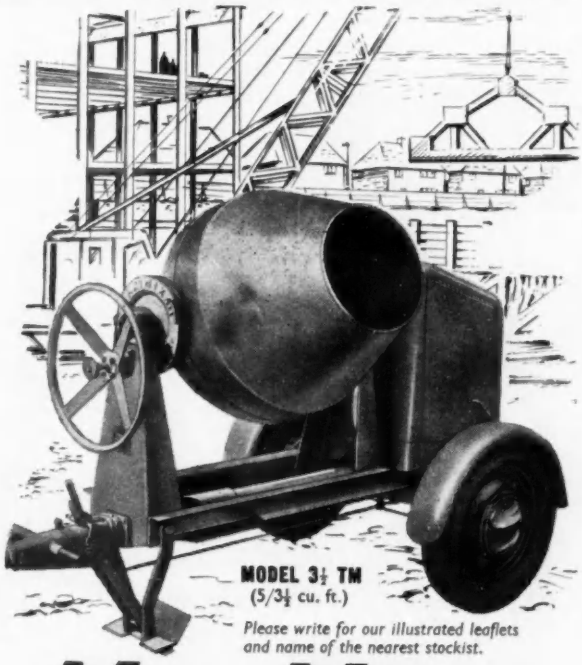

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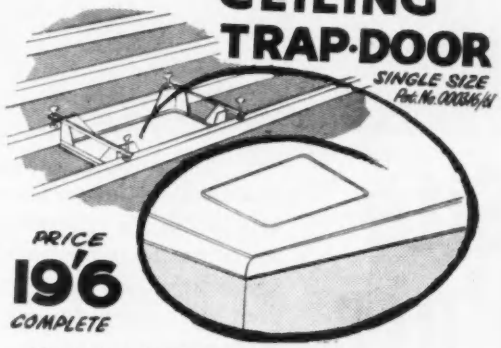

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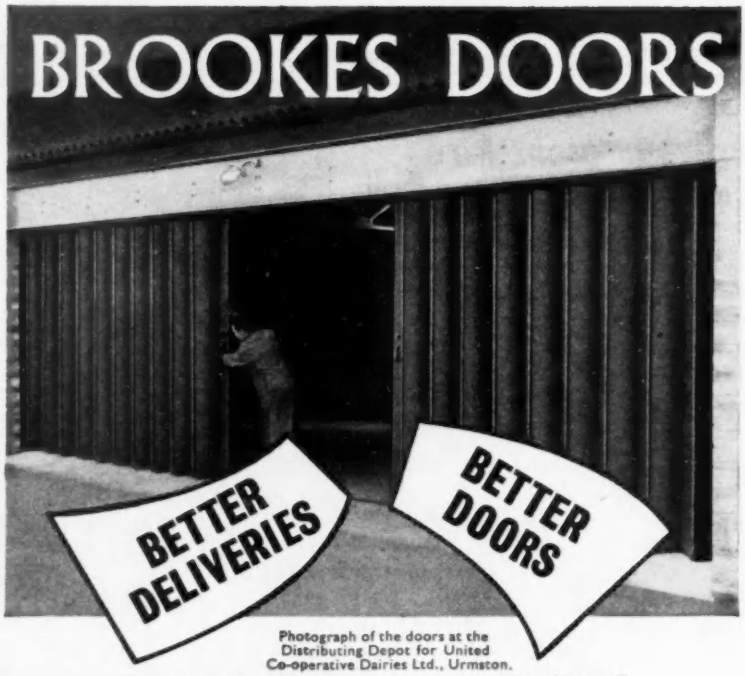

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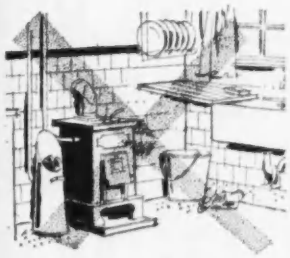

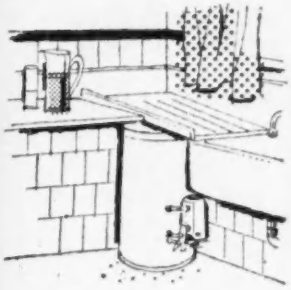

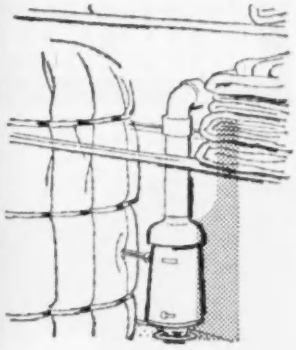

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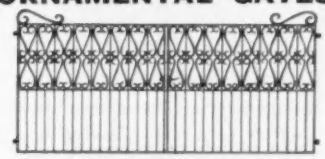

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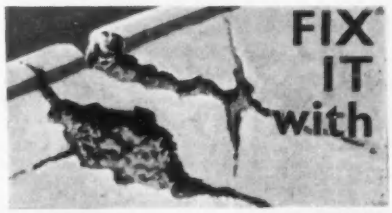

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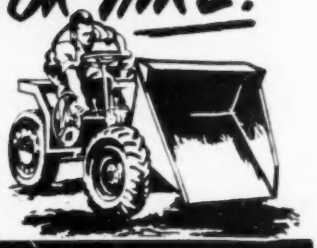

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1. A first-class **DESIGNER**. Salary up to £1,650.

2. A qualified **GROUP-LEADER** with experience of tall flats and offices. Salary up to £1,650.

3. **RESEARCH** and **DEVELOPMENT ASSISTANT** to conduct investigations into structure, costings, standardisation, to keep abreast of housing design throughout the world and to be able to distribute information by means of digests. Salary up to £1,350.

4. **ARCHITECTURAL ASSISTANTS.**

Salaries up to £1,000.
Superannuation Scheme.
Assistance with housing if required.

Tel :—Epsom 1411 or write in confidence to :—

Chief Architect, New Ideal Homesteads Ltd.
61 South Street, Epsom, Surrey, or Telephone Epsom 1144.

QUANTITY SURVEYORS Require SENIOR ASSISTANT to prepare Final Account for extensive Contract in Sheffield. Salary £1,250 p.a. plus overtime.—Box 6272, "The Builder."

LONDON C.Q.S. have vacancy for qualified ASSISTANT (age 25-30) experienced in cost planning and estimating, taking-off and final settlements. Permanent appointment and good prospects. Superannuation scheme. Luncheon vouchers. Commencing salary £1,100 to £1,600, according to experience. —Write, full particulars, to Box 6291, "The Builder."

BUILDER'S QUANTITY SURVEYORS Required by National Building Company for London area. Must be fully experienced Sub-Contractors, Interims, Measurements through to Final Account. Profit Sharing and Pension Schemes available.—Apply in writing, stating age, full particulars of experience and salary required, to Box 6324, "The Builder."

QUANTITY SURVEYORS

required for important contracts in Chester

Attractive opportunity for men of initiative and enterprise. Write for Enquiry Form.

BRANCH MANAGER
R. COSTAIN & SONS (LIVERPOOL) LIMITED
HANDBRIDGE HOUSE,
OVERLEIGH ROAD, CHESTER.

QUANTITY SURVEYOR for DEVELOPMENT COMPANY

An opening occurs for a Quantity Surveyor of good education and appearance to broaden his outlook in a progressive development company on varied projects throughout England, Scotland and Wales. Salary about £950 with great scope for advancement.

TAYLOR WOODROW INDUSTRIAL ESTATES LIMITED
41 WELBECK STREET, W.1.

QUANTITY SURVEYORS AND WORKERS UP

REQUIRED FOR LARGE CONTRACT AT LONDON AIRPORT AND HEAD OFFICE.

FREDERICK S. SNOW & PARTNERS require further staff for their expanding Quantity Surveyor's Department. Permanent positions, Luncheon Vouchers, Superannuation etc.

Write stating age, experience, qualifications and salary required to:—
E. W. Ashford, A.R.I.C.S. F.I.Q.S.
Ross House, 144 Southwark Street, London, S.E.1.

SHEPHERD

SENIOR QUANTITY SURVEYOR

An interesting vacancy has arisen at one of our Area Offices in Yorkshire for a Quantity Surveyor, preferably between thirty and forty years of age, with sound training and a minimum of ten years' building contracting experience.

The successful applicant will be fully responsible for all aspects of quantity surveying for a number of contracts and will also assist with production control. The duties will entail close liaison with site management.

The company forms part of an established group which is responsible for a wide variety of building and civil engineering work in Yorkshire, Lancashire and the North-Eastern Counties. Continued growth is envisaged and future prospects are favourable for a man of sound ability and integrity.

A good commencing salary and bonus will be offered together with a generous non-contributory pension and life assurance. A company car will be provided and assistance with housing will be available if required.

Application forms will be sent to suitable candidates and initial replies giving brief details should be addressed for the personal attention of :

Michael F. Shepherd, F.I.O.B.—Director,
F. SHEPHERD & SON LTD.,
Blue Bridge Lane,
York.

AIC

QUANTITY SURVEYOR

Executive Selection Division *is advising on the following appointment*

for the North East Cheshire Office of a large Building and Civil Engineering Company who wish to appoint a Building Surveyor. Applicants should be fully experienced in the preparation of interim claims and final accounts for contracts up to £500,000 in value. They should also be experienced in taking off and preparing Bills of Quantities for private negotiated and alteration works. They must possess a current valid driving licence. The appointment is pensionable and carries life insurance. The commencing salary will not be less than £1,100 per annum. (Mr. W. G. Carter: Reference 2527/1.)

Brief written applications quoting reference number should be sent, in complete confidence, to the Consultant concerned at:

ASSOCIATED INDUSTRIAL CONSULTANTS LIMITED
KNIGHTSBRIDGE HOUSE, 197 KNIGHTSBRIDGE LONDON SW7

Associated Industrial Consultants

QUANTITY SURVEYORS. One SENIOR and one ASSISTANT Required for Birmingham; one ASSISTANT Required for Buckinghamshire. Experienced in preparation of Interim Certificates and Final Accounts. Please state past experience and salary required. Holiday arrangements respected.—Box 6338, "The Builder."

CHARTERED QUANTITY SURVEYOR Required immediately by expanding Architectural practice for major development schemes in the South. These extend up to multi-storey projects and from small estates up to small townships of 2,500 units or over. It is essential, therefore, for applicants to have had experience on Contracts over £50,000 in value. The post offers a permanent position and a generous non-contributory Pension scheme. Salary will be commensurate with ability and experience. —Please apply, in writing in the first instance, stating age, experience and salary expected, to WALTER G. PALMER & ASSOCIATES, 1 Spring-crescent, Portswood, Southampton.

YOUNG QUANTITY SURVEYOR Required by Chartered Quantity Surveyors in City. Good opportunities and experience. Write giving brief details and salary required.—Box 6360, "The Builder."

SENIOR QUANTITY SURVEYOR Required for London office of provincial firm, to take charge under visiting principal. Luncheon vouchers, five-day week. Salary by arrangement.—Box 6390, "The Builder."

ASSISTANT QUANTITY SURVEYORS, qualified A.R.I.C.S., Required. Luncheon vouchers, three weeks' holiday, superannuation scheme after probationary period. General duties with minimum supervision. Salary according to experience and ability.—Write, stating training and experience, to JOHN LEANING & SONS, Chartered Quantity Surveyors, 28 John-street, London, W.C.1.

CHARTERED QUANTITY SURVEYORS Require experienced MEASURING SURVEYOR for large civil engineering contract in North Kent.—Please write, stating age, experience and salary required, to Box 6397, "The Builder."

EXPERIENCED TAKER-OFF/MEASURING SURVEYOR Required by Chartered Quantity Surveyors for building and civil engineering contract in Scunthorpe.—Please apply, stating age, experience and salary required, to Box 6398, "The Builder."

EXPERIENCED SURVEYOR is Required by Chartered Quantity Surveyors for a large civil engineering contract in North Kent.—Please write, stating age, experience and salary required, to Box 6399, "The Builder."

CHARTERED QUANTITY SURVEYORS have vacancies for JUNIOR SURVEYORS for a large civil engineering contract in North Kent.—Please write, stating age, experience and salary required, to Box 6400, "The Builder."

ASSISTANT QUANTITY SURVEYOR, R.I.C.S., Intermediate standard, Required in small office on varied and interesting work. Five-day week, L.V.s and pension scheme. Salary by arrangement.—F. B. BRYDEN & PARTNERS, 33 Catherine-place, Westminster, S.W.1. Tel.: VICtoria 0924/5.

CHARTERED QUANTITY SURVEYOR in York invites written applications to fill a vacancy for a Senior and a Junior ASSISTANT.—Please reply in confidence giving full particulars to Box 6117, "The Builder."

BIRMINGHAM QUANTITY SURVEYORS Require SENIOR ASSISTANT for Taking-off and Final Accounts. Permanent situation. Salary £1,350 p.a. plus generous car allowance and overtime if required. —Box 6412, "The Builder."

JUNIOR SITE MEASURING STAFF wanted for Chartered Quantity Surveyors' new Cheshire Branch office, working directly under Partner and using experimental methods.—Box 6440, "The Builder."

SITE QUANTITY SURVEYOR Required by well-established building and civil engineering contractors. Must have considerable experience of civil engineering and building sites and be capable of carrying out all quantity surveying duties with regard to such contracts. Work will be mainly in the Manchester area. Car owner will be paid mileage allowance. Permanent staff appointment. Salary by arrangement. Pension scheme.—Applications to Box 6435, "The Builder."

CHIEF SENIOR QUANTITY SURVEYOR Required by North East professional firm, applicants must be A.R.I.C.S. and have had a wide experience in all branches of the profession.—Apply, stating age, experience and salary required, Box 6434, "The Builder."

MANCHESTER. CHARTERED QUANTITY SURVEYOR Required to take charge of section dealing with major projects. Must be capable Taker-off, prepared to accept responsibility. A good salary is offered with possibilities of partnership after proven ability.—Write, stating age and experience, to Box 6436, "The Builder."

QUANTITY SURVEYORS. Excellent opportunities in Consulting Engineers' office on large industrial project in the Liverpool area.—Write, Box 944, "The Builder."

ASSISTANT QUANTITY SURVEYOR Required in Leeds' branch office of Chartered Quantity Surveyors for measuring variations, preparing certificates and final accounts with minimum supervision on large contracts in Yorkshire.—Please write, stating age, experience and salary required, to Box 6468, "The Builder."

QUANTITY SURVEYOR Required to I.Q.S., intermediate or final standard, to work in a senior capacity with civil engineering and building contractors. The successful applicant will be responsible for interim, final and variation accounts, and should be able to let sub-contracts and remeasure on completion. There is ample scope for promotion within the company for an ambitious man who is interested and prepared to work in the liaison with an efficient contract planning department.—Apply, giving full details, to Contracts Director, Box 6496, "The Builder."

SHEFFIELD. SENIOR ASSISTANT Required by Quantity Surveyors for Final Account work. Must be capable of working with minimum supervision. Basic salary £1,350 per annum, plus overtime and car allowance.—Box 6491, "The Builder."

CHARTERED QUANTITY SURVEYORS have vacancies for senior and junior ASSISTANTS. Salaries according to experience and willingness to work overtime (paid) when required.—Please apply, in writing, marking envelope "Confidential" DALE AND ROSE, 6 The Crescent, Taunton.

QUANTITY SURVEYING ASSISTANT Required for Taking-off, Interim Valuations and Final Accounts.—Write, giving details of age, experience and salary required, to TITE & CAWTE, Chartered Quantity Surveyors, 6 Rockstone-place, Southampton.

ASSISTANT QUANTITY SURVEYOR Required by Quantity Surveyors in Gloucester. Five-day week. Varied and interesting work.—Apply, stating age, experience and salary required, to Box 6489, "The Builder."

Applications are invited from

QUANTITY SURVEYORS

initially for employment on a large contract in Central London, which will last some years.

Applicants, who should preferably have a recognised qualification and have had experience of contracting are invited to send full details to: Box No. QS 5391, A.K. Advg., 212a Shaftesbury Avenue, W.C.2.

The appointments offer interesting work, good conditions of employment and excellent scope for advancement.

SURVEYORS

BUILDERS' ESTIMATING SURVEYOR Required near Reading. Experienced in dealing with estimates from enquiry to final account. Must be capable of organising and supervising his own jobs and working on his own initiative.—Reply giving full particulars of experience, references, age and salary required, Box 940, "The Builder."

MEASURING SURVEYOR Required by Quantity Surveyors, Westminster, for work in the London area. Salary according to qualifications and experience and reviewed regularly. Luncheon vouchers, pension scheme.—Apply, stating age and experience, to Box 936, "The Builder."

MEASURING SURVEYOR for interim valuations and final accounts Required by London Chartered Quantity Surveyors. Luncheon vouchers and non-contributory pension scheme.—Write, stating age, experience and salary required, to Box 973, "The Builder."

MAINTENANCE SURVEYOR, age 22/27, London property company.—Write The Surveyor, Box 949, "The Builder."

BUILDER'S MEASURING SURVEYOR Required, contracts Berks/Hampshire; permanency.—Write, full particulars, to DRURY CONSTRUCTION (SOUTHERN), Ltd., 4 Farncombe-road, Worthing.

BUILDING SURVEYOR Required by progressive company in West London. Should have experience of site measurement, preparation of valuations and final accounts.—Write full details and salary required, to Box 6350, "The Builder."

BUILDER'S SURVEYOR Required for interim valuations and final accounts.—Apply in writing, stating age and salary required, to the Chief Surveyor, MORRIS & JACOMBS, Ltd., 71 Hobmoor-road, Small Heath, Birmingham, 10. Existing holiday arrangements honoured. Permanent position to suitable applicant.

SURVEYOR Required by small South London Building Contractors to assist Estimator and Contracts Manager. This is the right position for somebody who wishes to get ahead.—Write, Box 6407, "The Builder."

JUNIOR SURVEYOR Required to act as Builders' Assistant in modern company carrying out construction of high quality individual houses. A first-class opportunity exists for a young man not afraid of hard work.—Applications, in confidence, to "COUNTRY RESIDENCES, Ltd.," Grove House, London-road, Isleworth, Middlesex.

PRACTICAL BUILDING SURVEYOR Required as Assistant to Chartered Surveyor for control of building work in London area. Salary £800 to £900.—Reply fully to Box 6201, "The Builder."

BORDER ENGINEERING CONTRACTORS LTD.

have a vacancy for a

SENIOR COSTING SURVEYOR

to be in complete charge of the organisation of Bonus Schemes in the West Cumberland Area. Ability to measure and cost all trades is essential. Salary range £800–£1,000 according to experience and ability. Applications to be forwarded in writing, stating age, experience, qualifications, and present salary, to the Manager,

P.O. Box No. 23, Whitehaven

OPUS LIMITED

require

SENIOR SURVEYOR

Must be fully experienced with interim valuations and Sub-Contractors payment. Complete remeasurement of rebuilds up to £50,000 in Midlands and South, negotiation with Quantity Surveyor for interim and final accounts.

The position is progressive and carries a good salary. Pension Scheme and five-day week. Reply, with full particulars and Salary required, to:—

20, Telford Avenue, London, S.W.2.

KYLE STEWART (CONTRACTORS) LTD.

require

SURVEYOR/ESTIMATOR

in department for work up to £30,000 in value. Applicants must be fully experienced in dealing with enquiries, site measuring and final accounts. Participation in Company's bonus, pension and health schemes and excellent opportunity for advancement. Car provided. Apply in writing stating age, experience and salary required to **The Managing Director, Kyle Stewart (Contractors) Ltd., Ardshiel House, Empire Way, Wembley, Middlesex.**

JUNIOR MEASURING SURVEYOR, principally for work in London area. Required by City Chartered Quantity Surveyors.—Write, stating age, experience and salary required, to Box 6244, "The Builder."

SURVEYOR Required with thorough knowledge of W.D. Schedule. Good salary and bonus to enthusiastic man.—LEWIS & WATTERS, Greyfriars, Stafford.

SENIOR SURVEYORS Required for work in the London area with a national contractor. The successful applicants will be given an opportunity to join the staff pension scheme after a satisfactory period. This advertisement is only of interest to first-class men who are willing to work in a team. Every encouragement will be given for maximum effort.—Please write, giving full details, to Box 6266, "The Builder."

TECHNICAL ORDER SURVEYOR Required for Buying Department, able to take-off materials, etc., from Drawings.—Applications, in writing, giving full details and salary required, to: General Manager, at 10 Upper Grosvenor-street, London, W.1.

MARSHALL-ANDREW & CO. LTD.

require

SURVEYOR

with experience of handling all types of Surveying matters from initial stage to Final Account. Good prospects for successful applicant. Pension Scheme in operation. A good salary offered etc. Apply in first instance, with full details of age and experience, to

The Managing Director,
Marshall-Andrew & Co. Ltd.,
St. Andrew's House,
Broadway, St. James' Park,
S.W.1.

MAPLE & CO. LTD.

have vacancies in their
Building and Decorating Department

for an

ESTIMATING SURVEYOR

and an

ASSISTANT

also a

DRAUGHTSMAN

with knowledge of high-class decorations, joinery and conversions. These are permanent staff positions with good commencing salaries and excellent prospects, superannuation and free life assurance.

Apply by letter, stating age, experience and present salary, to:

The Staff Director,
Messrs. Maple & Co. Ltd.,
Tottenham Court Road, London, W.1

Humphreys Limited

require

SENIOR SURVEYOR

capable of handling all surveying duties on major contracts.

Experience of civil engineering contracts an advantage. Permanent position based on London Office.

The successful applicant must have exceptional initiative and ability to make full use of all the modern techniques employed by the Company

Apply in writing stating age, experience and salary required, to Personnel Department, 199 Knightsbridge, S.W.7.

COST AND BONUS SURVEYORS

required

for Building contracts initially in the London Area.

The appointments are permanent and pensionable and offer good prospects for advancement in this and other fields within the expanding organisation.

Write in full confidence, giving age, qualifications, experience, and salary required to:—

Personnel Manager (M.6840),
HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN) LTD.,
1, Queen Anne's Gate, LONDON, S.W.1.

SENIOR SURVEYOR

REQUIRED

Must have sound knowledge of site measuring, preparation of interim and final accounts, variations, etc. Pension scheme in operation. Full particulars of experience, age, qualifications and salary required.

To Chief Surveyor,
R. Fielding & Son (Builders) Ltd.
Stanhope Road, Blackpool, Lancs.

BUILDERS' SURVEYOR

required for

Contractors' Office in Cardiff

Pension Scheme in operation.
Apply in writing, stating age, experience, etc. to

E. TURNER & SONS, LTD.,
Havelock Buildings, Penarth Road,
Cardiff.

TERSONS LIMITED

require

A SENIOR SURVEYOR

for work in the Birmingham area

With a view to permanency the successful applicant will be invited to join the Company's pension scheme after a trial period.

This advertisement is aimed at a First Class man who is willing to work in a team. Every encouragement will be given for maximum effort.

Please write giving full details of career and salary, quoting reference 'L.K.'. All letters will be treated in the strictest confidence.

Regional Chief Surveyor,
TERSONS LIMITED,
Grove House,
Sutton New Road, Erdington,
Birmingham, 23

SENIOR AND ASSISTANT SURVEYORS

required for varied and interesting contracts. Permanent position. Superannuation scheme. 5-day week. Existing holiday arrangements honoured. Write stating age, experience and salary required to Chief Surveyor

WILLIAM MOSS & SONS, LTD.,
North Circular Road, Cricklewood,
London, N.W.2

LONDON CHARTERED QUANTITY SURVEYORS will Require this autumn first-rate SURVEYOR (A.R.I.C.S.). Experienced all aspects of professional work. Permanent position; excellent prospects for initiative and personality. Commencing salary £2,000 per annum.—Replies, marked confidential, giving full particulars, to Box 6292, "The Builder."

BUILDING SURVEYOR

required by

TROLLOPE & COLLS LTD.,

for preparing specifications, measuring and generally assisting with estimates mainly for alterations and redecorations, etc., to City Offices. Write stating age, experience, salary required, to:—

Assistant Secretary,
1, Noble Street,
Gresham Street,
London, E.C.2

MEASURING SURVEYOR Required to operate in the London area.—Apply in writing, giving full details to Accountant, LIMMER & TRINIDAD, Island Row, E.14.

MESSRS. JOSEPH MENDLESON AND PARTNERS Require SURVEYOR in busy, progressive architects office for interesting work involving alterations, additions, specifications, site supervision and some working drawings. Opportunity for eventual control of a section of the practice. Considerable scope for a progressive applicant. Top salary, five-day week, luncheon vouchers.—Apply, JOSEPH MENDLESON AND PARTNERS, 71 Wimpole-street, London, W.1. Telephone: HUNter 0361.

PLUMBING SURVEYOR Required for London contractors. Experienced in Interim and Final Accounts. Good prospects, pension scheme. Write giving full details age, salary and experience.—Box 6329, "The Builder."

MEASURING SURVEYOR Required by well-known firm of Building and Civil Engineering Contractors in Wiltshire. Experience in measuring on the W.D. Schedule essential. The position has considerable prospects for the right candidate (preferably under 35). The appointment would be permanent, salary commensurate with experience and qualifications. Pension Scheme and Sick Benefit in operation.—Apply in first instance, with full particulars of experience and salary required, to Box 6322, "The Builder."

KEEN YOUNG ESTIMATING SURVEYOR Required in S.E. London area, with organising ability and experience in commercial alterations and jobbing work from enquiry to final account.—Write, stating age, experience and salary required, Box 6431, "The Builder."

BUILDING SURVEYOR Required, with about five years' post-qualification experience, for work on new buildings, alterations and conversions. Competent draughtsmanship and experience in preparing detail drawings essential. Salary up to £1,200 according to experience.—Apply, in writing, or by telephone, to BROWETT, TAYLOR & CO., Chartered Surveyors, 3 & 4 Lincoln's Inn Fields, London, W.C.2. CHAncery 8275.

TECHNICAL ASSISTANT (Estate) Required for Birmingham office managing a large number of scattered properties of all types but mainly industrial. Applicants must have a professional qualification, sound knowledge of property law, leases, dilapidations, valuations for purchase and rent, rating and be able to act with limited supervision. Salary within the range £1,120-£1,340, according to qualifications and experience.—Applications, giving age, experience and qualifications, to Divisional Manager (SV.145), BRITISH ROAD SERVICES, Ltd., 30 Harborne-road, Edgbaston, Birmingham 15.

THE TRENT AND HOVERINGHAM CONCRETE COMPANIES Require a BUILDERS' SURVEYOR to take charge of a department preparing Final and Interim Accounts for their precast concrete framed structures and prestressed concrete products. The position is an important one within the companies, as it is intended to expand the sales of concrete structures. With this aim in view a large new factory has recently been brought into operation. Applicants should be between the ages of 28 and 40 and should have had experience of estimating or in the preparation of final accounts in a builder's office, or, alternatively, have had experience as a Quantity Surveyor. The post will be permanent and the person appointed will be obliged to join the Superannuation Scheme.—Apply, in confidence, to: The General Manager, TRENT CONCRETE, Ltd., Colwick, Nottingham.

LARGE Building and Civil Engineering Contractors, Dublin City, have vacancies for three SURVEYORS to deal with interim payments, site measurements, final accounts, etc.—Box 6452, "The Builder."

EXPERIENCED MEASURING SURVEYOR Required by City Chartered Quantity Surveyors. Pension and Life Insurance scheme.—State age, experience and salary required, to Box 6458, "The Builder."

MEASURING SURVEYOR, experienced Interim Valuations and Final Accounts. State age, experience and salary required.—Apply by letter to C. CORNES & SON, Ltd., 169 Litchfield-street, Hanley, Stoke-on-Trent.

SENIOR SURVEYOR Required in Architects' office, W.C.1. Salary £1,000-£1,500, according to experience.—Box 6475, "The Builder."

BUILDING SURVEYORS Required. Must be experienced in measuring Sub-Contractors, Variation Orders, Preparation of Interim Valuations and Final Accounts.—Apply, stating age, experience and salary required, to S. VARNEY AND CO., Ltd., Credon House, Verney-road, London, S.E.16.

ROBERTSON THAIN, Ltd., Ellesmere Port, Wirral, have vacancies in the Surveying Section of their Sales Department: (a) SENIOR SURVEYOR, Age 30/35, A.I.Q.S. or A.I.O.B. preferred. Must be thoroughly experienced in negotiating final accounts at professional level, and prepared to show initiative in the administration of a comparatively new section. (b) ASSISTANT SURVEYOR. Age 22/25. Experience essential in preparing site valuations, taking-off and basis of estimating. The above appointments offer excellent opportunities with a well-established, progressive, organisation. Contributory pension scheme, excellent canteen facilities.—Please state full particulars of age, education, business career and qualifications, to Personnel Manager, at the above address.

BUILDERS' MEASURING SURVEYOR Required for measuring and agreeing sub-contractors' accounts, measuring V.O.s, preparation of valuations and bonus schemes, all trades.—Apply, stating age, experience and salary required, GRACE & MARSH, Ltd., New Bridge Works, Waddon, Croydon.

SENIOR SURVEYOR

required for major contract in Southampton area. Ability to deal with all aspects of final account required.

Please write giving details of experience, salary required, etc., to—

Chief Quantity Surveyor,
Wilson Lovatt & Sons, Ltd.,
16 Grosvenor Crescent, London,
S.W.1

Assistant Surveyor

required in West Middlesex area.

Applicant must be experienced in all phases of surveying and in agreeing final accounts. Opportunity to understudy Estimator. Full details to

Box No. 6500 "The Builder"

ASSISTANT SURVEYORS

LEADING professional firm S.W. London, acting for well-known estate development companies, Requires ASSISTANT BUILDING SURVEYOR for work on preparation of working drawings, supervision of building, etc. Applicant must have Inter. R.I.C.S. (Building).—Write, stating age, experience, etc., Box 6340, "The Builder."

ASSISTANT QUANTITY SURVEYOR (21-25) Required by Building and Civil Engineering Contractors for Kent area. Experienced Site Measurement, Valuations and Taking-off.—Box 6447, "The Builder."

ASSISTANT BUILDING SURVEYOR, aged 24-30, Required by well-known Horley, Surrey Builder specialising on private house estate development, to work as PERSONAL ASSISTANT to Director. Good opportunity and prospects for advancement to right type of man. Assistance given in travelling.—Write, giving full details of age, experience and salary required, to Box 6481, "The Builder."

JUNIORS

JUNIOR TRAINEE QUANTITY SURVEYOR Required by Westminster Quantity Surveyors.—Write, giving particulars, to Box 958, "The Builder."

OFFICE JUNIOR Required in small Quantity Surveyor's office in Victoria area. Boy recently left or about to leave school preferred.—Write, giving details of age and education, to Box 6317, "The Builder."

JUNIOR TRAINEE Required by Chartered Quantity Surveyors in City. Good education essential. Write giving details.—Box 6361, "The Builder."

JUNIOR, wishing to learn the profession, Required by Chartered Quantity Surveyors, London, W.C.1.—Please reply, in own handwriting, stating details of general education.—Box 6381, "The Builder."

TAKERS OFF

SENIOR TAKER-OFF for responsible position in busy Quantity Surveyors' office. Westminster. Salary commensurate with responsibility. Luncheon vouchers, pension scheme.—Brief details to Box 931, "The Builder."

TAKERS-OFF Required in Chartered Quantity Surveyors' office on work which is varied in nature. Good salaries will be paid to persons who will maintain the high professional standard of the office. Luncheon vouchers, pension and life insurance schemes in operation.—Apply by telephone, Chancery 5841, Reference S.D.M., or in writing, to Box 910, "The Builder."

TAKERS-OFF and MEASURING SURVEYORS Required by London Chartered Quantity Surveyors. Luncheon vouchers and non-contributory pension scheme.—Write, stating age, experience and salary required, to Box 977, "The Builder."

EXPERIENCED TAKERS-OFF Required for professional offices in the East Croydon area. Salary according to qualifications and experience. Luncheon vouchers. Contributory pension scheme.—Apply, with brief details, to Box 921, "The Builder."

REQUIRED immediately Senior TAKERS-OFF and MEASURING SURVEYORS for Variation Accounts for very important Contracts in Yorkshire. Please reply, stating age, experience, qualifications and salary required. Removal expenses and subsistence allowances pending residence in Yorkshire will if necessary be paid.—Box 6116, "The Builder."

TAKERS-OFF of Final and Intermediate standard Required by busy Quantity Surveyors, Victoria. An expanding firm with varied work and excellent prospects for the man who is prepared to give his best. Luncheon vouchers, pension fund; salary according to qualifications and experience reviewed regularly.—Apply, with brief details of qualifications, experience and salary required, to Box 959, "The Builder."

EXPERIENCED TAKER-OFF Required by City Chartered Quantity Surveyors. Pension and life insurance scheme.—State age, experience and salary required, to Box 6243, "The Builder."

EXPERIENCED TAKER-OFF Required in Quantity Surveyors' office, London. Please state age, experience and salary required.—Box 6267, "The Builder."

TAKER-OFF Required for Quantity Surveyor's office, Kings Cross area. Intermediate/Final standard. Good prospects for experience and advancement in expanding office.—Write stating age, experience and salary required, to Box 6264, "The Builder."

JUNIOR TAKER-OFF, of Intermediate standard, Required by Quantity Surveyors in Lincoln's Inn area. Opportunity to work on all trades on varied projects. Five-day week and luncheon vouchers. Details of experience and salary required, to Box 6279, "The Builder."

TAKER-OFF/MEASURING SURVEYOR (age about 25) Required by C.Q.S. (S.W.1) for responsible position, handling number of contracts. Permanent position; superannuation scheme; luncheon vouchers. Commencing salary £1,000-£1,200, according to experience.—Write, full particulars, to Box 6301, "The Builder."

TAKERS-OFF Required by London Quantity Surveyors. Salary scale £900-£1,500 per annum, according to ability, plus overtime.—Please write, giving details of experience, age, etc., to Box 6306, "The Builder."

LONDON CHARTERED QUANTITY SURVEYORS developing in Sheffield and Rotherham area Require Senior and Junior TAKERS-OFF for large Civil Engineering and Building works in Yorkshire. Appointments will, in the first instance, be on site, but have appreciable opportunities for advancement in an expanding organization.—Write giving details of previous experience, age and expected salary, to Box 6323, "The Builder."

TEMPORARY FULL-TIME ASSISTANCE Required by Chartered Quantity Surveyors in London for six weeks from mid-August at special high rates of pay. (a) Qualified and experienced TAKERS-OFF; (b) Intermediate standard TAKERS-OFF; (c) WORKERS-UP.—Apply to Box 6325, "The Builder."

LONDON firm of Chartered Quantity Surveyors Require fully qualified TAKER-OFF with view to Junior Partnership. Please give full particulars, capital available, etc., and state salary required.—Box 6327, "The Builder."

TAKER-OFF Required in small Quantity Surveyor's office in Victoria area.—Write, stating age, details of experience and salary required, to Box 6316, "The Builder."

CLARENCE E. SMART AND PARTNERS Require JUNIOR TAKERS-OFF with not less than four years' experience, for their London and Peterborough offices.—Applications to 42 Theobald's-road, London, W.C.1, or Market Place Chambers, Peterborough.

LONDON firm of Chartered Quantity Surveyors Require a SENIOR ASSISTANT for a permanent position with a high level of remuneration, luncheon vouchers and pension scheme.—Please apply, giving details of age, experience and salary required, to Box 6401, "The Builder."

SENIOR ASSISTANT Required by London firm of Chartered Quantity Surveyors. Salary up to £1,700 per annum according to age and experience. Luncheon vouchers and pension scheme.—Please apply to Box 6402, "The Builder."

CHARTERED QUANTITY SURVEYORS in London have vacancy for qualified TAKER-OFF (A.R.I.C.S. preferred) in salary range £950-£1,350 per annum. Permanent position with good prospects and varied experience. Luncheon vouchers, overtime payments and pension scheme.—Please apply, stating age, experience and salary required, to Box 6403, "The Builder."

LONDON firm of Chartered Quantity Surveyors Require recently qualified TAKER-OFF as permanent appointment. Position offers excellent experience.—Applicants are invited to write to Box 6404, "The Builder," with full details of age, experience and salary requirements.—Box 6404, "The Builder."

CHARTERED QUANTITY SURVEYORS have a vacancy for a qualified TAKER-OFF (age 25-33) for a responsible position in office in Victoria area. Holiday arrangements honoured. Usual extras plus annual bonus.—Box 904, "The Builder."

CHARTERED QUANTITY SURVEYORS Require (i) experienced TAKERS-OFF, aged 25-30, A.R.I.C.S. preferred. Opportunity might arise for one applicant to take managerial position in provinces. (ii) Junior TAKER-OFF, able to assist with working-up. Luncheon vouchers, pension scheme. Holiday arrangements honoured.—Apply, stating age, experience and salary required, to MARTIN SHEFFIELD AND BRISTOW, 29 Sackville-street, London, W.1. REGent 1963-4.

TAKERS-OFF Required in small Chartered Quantity Surveyor's office, Gloucester-road area, on work which is varied in nature. Good salaries will be paid.—Apply, stating age and experience, Box 6420, "The Builder."

TAKER-OFF Required, Chartered Quantity Surveyor's office, Brighton; 5-day week; L.V.s; holiday arrangements honoured.—Box 6428, "The Builder."

JUNIOR and SENIOR TAKERS-OFF, of Intermediate and Final standard, Required in professional office in Manchester for major hospital, school and industrial projects. Five-day week, pension scheme and overtime.—Apply, in own handwriting, stating age and experience, to Box 6437, "The Builder."

TAKERS-OFF of Intermediate to Final standard Required by London Chartered Quantity Surveyors. Salary up to £1,000 for 5-day week, according to experience, plus luncheon vouchers and overtime. Holiday arrangements honoured.—Write, stating age, experience, and salary required, to Box 906, "The Builder."

EXPERIENCED TAKER-OFF Required by Victoria Quantity Surveyors. Permanent position. Five-day week. Pension and Life Assurance scheme. Please state age, experience and salary required.—Box 6448, "The Builder."

MESSRS. OSWALD E. PARRATT AND PARTNERS Require Senior and Junior TAKERS-OFF for their Harlow office. Five-day week, pension scheme. Housing accommodation may be available. State age, experience and salary required, to 20 The Rows, Stone Cross, Harlow, Essex.

EXCELLENT OPPORTUNITIES offered to newly qualified A.R.I.C.S. as TAKER-OFF on permanent staff of South Wales firm of Chartered Surveyors. Five-day week and pension and sickness schemes available. Salary £950 to suitable applicant with good prospects for the future.—Particulars to Box 6480, "The Builder."

TAKER-OFF, of Intermediate to Final Standard, Required by Quantity Surveyors in Gloucester. Five-day week and pension scheme.—Apply, stating age, experience and salary required, to Box 6490, "The Builder."

E. R. BABBS & SONS Require TAKER-OFF (age 20-30) in Branch Office.—Send usual particulars to Clarence House, Clarence-street, Gloucester.

JUNIOR TAKER-OFF and SITE MEASURER Required by C.Q.S. in West Sussex. Five-day week. L.V.s. Write stating age, experience and salary required.—Box 6482, "The Builder."

WORKERS UP

WORKERS-UP Required by London Chartered Quantity Surveyors for permanent staff. Luncheon vouchers.—Write, stating age, experience and salary required, to Box 979, "The Builder."

WORKER-UP, with at least two years' experience in abstracting and billing. Required by Chartered Quantity Surveyors in South Kensington who would expect him to continue working-up for a further minimum period of 18 months. Commencing salary £500-£850 for 5-day week, according to experience, plus overtime and luncheon vouchers. Holiday arrangements honoured.—Box 997, "The Builder."

JUNIOR WORKER-UP Required in Q.S. Section of Architects' office, preferably willing to concentrate on Working-up. Interesting and varied programme in pleasant out of town offices. Five-day week.—MORRISON AND PARTNERS, 103 Belper-road, Derby.

WORKER-UP REQUIRED by small City firm of Chartered Quantity Surveyors. Two years' experience in professional office. Five-day week. Write stating age and salary required.—Box 6284, "The Builder."

WORKER-UP Required by C.Q.S. (S.W.1). Luncheon vouchers. Pension scheme. Salary approx. £900 per annum according to experience.—Write full particulars to Box 6302, "The Builder."

LONDON firm of Chartered Quantity Surveyors have vacancy for WORKER-UP. Permanent position, luncheon vouchers, pension scheme, overtime paid. —Please write, stating age, experience and salary required, to Box 6405, "The Builder."

WORKER-UP, with not less than three years' experience of working-up. Required for small Quantity Surveyor's office close proximity Victoria Station. Five-day week. Overtime available. Please reply, stating experience and salary.—Box 6389, "The Builder."

WORKER-UP, Junior or Intermediate standard. Required in small, busy, professional office in the City. Permanent position, with opportunities for advancement.—'Phone: MONarch 0597.

WORKER-UP Required. Chartered Quantity Surveyor's office, Brighton. 5-day week. L.V.s Holiday arrangements honoured.—Box 6427, "The Builder."

ENGINEERS

PLANNING ENGINEER Required for Contracts Dept. at Head Office. Applicants should be familiar with general building and concrete work. Good conditions of employment and assistance with housing if required.—Applications in confidence, giving age, experience and present salary, to Contracts Manager, THE LONDON FERRO-CONCRETE CO., Ltd., Maxted Close, Hemel Hempstead, Herts.

CUBITTS

Applications are invited for positions as

SITE ENGINEERS

in South West England.

Initially the appointments will be on large structural engineering contracts and offer excellent scope for advancement in a rapidly developing section of the Company's activities.

Please send full details of age, experience and qualifications to:—

Personnel Manager (M.6841),
HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN) LTD.,
1, Queen Anne's Gate,
LONDON, S.W.1.

SENIOR TECHNICAL ASSISTANT Required, experienced in the design, installation and economics of all types of heating and ventilating systems, and the control of staff. A.M.I.E.E., A.M.I.Mech.E., or A.M.I.H.V.E. desirable Commencing salary £1,230 rising to £1,350 Free and other travel facilities; superannuation fund; five-day week.—Apply, giving details of experience and qualifications, to Chief Civil Engineer (Ref. SF), SOUTHERN REGION, BRITISH RAILWAYS, Waterloo Station, S.E.1.

A MAJOR CONTRACTOR Requires a Junior CIVIL ENGINEER for varied site duties. Some site and drawing office experience is needed so that he can set out accurately, interpret drawings and be a useful member of a team building complete chemical and industrial plants. This is a good opportunity for a young man of initiative recently qualified or about to qualify. Commencing salary in the region of £1,200 per annum or more according to experience and qualifications. Usual benefits of a well-established company include pension and life assurance, etc.—Please write, giving full particulars, in confidence, to Box 6479, "The Builder."

ESTIMATORS

ESTIMATOR/SUPERVISOR Required for pricing and running contracts in London area.—Write full particulars, experience and salary to H. BRADFORD & SONS, 37 Shacklewell-lane, E.8.

ESTIMATOR/SURVEYOR Required immediately. Age 25-30. Trained quantity surveyor and estimator to work under minimum supervision of Chief Estimator and Surveyor. Medium-sized contracts, variety of work, chiefly building.—Applications in strict confidence, stating qualifications and experience, to: E/S, WALTER SMITH (CONTRACTORS), Ltd., Riverhead, Sevenoaks, Kent.

ESTIMATOR/SURVEYOR Required by expanding firm of General Building Contractors. Fully experienced in taking-off from bills and plans. Preparing and submitting estimates complete. Preparing plans. Preparing interim and final accounts.—Central Hertfordshire. Accommodation available.—Box 6394, "The Builder."

ESTIMATOR Required for Joinery Section of North London firm of Joinery and Shopfitters.—Write stating age, experience and salary required, to Box 6231, "The Builder."

ESTIMATOR

required by firm of National Contractors (London area)

Applicants should have experience of tendering for all types of contracts up to about £750,000 in value. This position is permanent and pensionable and offers a top salary to the successful applicant. Write in first instance to:

Box No. 6470, "The Builder"

MATTHEW JAMES & CO. LTD.,

require a

SENIOR ESTIMATOR

experienced in tendering for Building & Civil Engineering Contracts up to £250,000 value.

Free life assurance and sickness benefit. Contributory pension scheme after probationary period.

Salary—not less than £1,250.0.0 per annum.

Apply giving full details, age, experience etc., to:

Chief Estimator,
Matthew James & Co. Ltd.,
15, Thayer Street,
London, W.1.

WATES build

WATES LIMITED

have a vacancy for an

ASSISTANT PLANNING ENGINEER

Site experience and knowledge of quantities and costing essential. Some knowledge of planning techniques would be an advantage. Abundant opportunities exist for an enthusiastic man to use his talent in a vigorous and growing organisation. Full range of staff benefits include a generous profit sharing bonus scheme. A good basic salary will be paid. Written applications should be sent to

The Personnel Manager, 1260 London Road, Norbury, S.W.16

JOINERY ESTIMATOR

Experienced Joinery Estimator for Works in Kingston, Surrey.

Salary in range £850/£1,250 depending on experience, age and ability. Pension. Excellent opportunity. Please send full details in strictest confidence to

Box No. 6370 "The Builder"

SENIOR ESTIMATOR

required
by

A. E. SYMES LIMITED

Applicants should be fully experienced in pricing bills of quantities for a wide variety of building work, the position is permanent with good salary and bonus.

Pension and Life Assurance Scheme. Holiday commitments honoured.

Apply in writing giving details of experience, age, salary required, to:—

Managing Director,
A. E. SYMES LIMITED,
236-252, High Street,
Stratford, London, E.15.

ESTIMATOR & SURVEYOR

required by

Ealing firm of Contractors
Apply in writing
stating age, experience
and Salary required to

Box No. 6367 "The Builder"

GALBRAITH BROS. LTD.

require a

SENIOR BUILDERS' ESTIMATOR & SURVEYOR

Excellent opportunities and well paid position to fully capable man. All types and sizes of contract.

Apply (in writing):
The Managing Director,
Crayford Bridge,
Crayford, Kent

SENIOR ESTIMATOR Required by Building Contractors whose head office is near Guildford. Applicants, who should be fully experienced, are invited to send full details of age, experience and qualifications, in confidence, to Box 909, "The Builder."

ESTIMATOR Required for Precast Concrete Works in Surrey, manufacturing Reconstructed Stone and Precast Reinforced Concrete Units of all types. Some experience in industry necessary. Salary depending on age and experience. Must be good arithmetically, accurate in all aspects and keen on this type of work. There exists in this company, excellent opportunities for advancement and this vacancy has occurred owing to the expansion which is taking place at the present time. Applications, in writing, addressed to Managing Director, H. B. CONCRETE CO., Ltd., Egham, Surrey.

CAWOOD WHARTON & COMPANY LIMITED HARROGATE

Due to expansion of operations, opportunities exist for first-class men to join progressive and sound Company in the following staff appointments:

SENIOR BUILDING ESTIMATORS

Fully experienced men of ability who are capable of handling complete tenders (all trades) for medium to large building projects. These are senior appointments.

ASSISTANT BUILDING ESTIMATORS

To work on important projects. Must have some experience in Building Contractor's office. Progressive appointments for men keen to get to the top by their own initiative.

Men wishing to progressive with a live Organisation should apply at once. Write giving full particulars of age, experience, etc., to:

The General Manager, Cawood Wharton & Co. Ltd., Constructional Department, Southlands, HARROGATE, Yorks.

ALL APPLICATIONS TREATED IN STRICT CONFIDENCE

GIBBS

BUILDERS & CONTRACTORS

ESTIMATOR

required immediately.

Fully experienced in all types of building work. Permanent appointment. Pensionable. With very progressive Company, high salary grading.

Applications are invited from keen, energetic young men who are really interested in the problems of modern estimating methods.

Apply to:—
Managing Director,
ARTHUR GIBBS & SON (Pudsey) LTD.,
P.O. Box 3, Pudsey, Yorkshire.
Tel. Pudsey 77777 (4 lines)

Established Company of Building and Civil Engineering Contractors require a

SENIOR ESTIMATOR

Applicants should be capable of competitive tendering for all types of Contracts up to £1,000,000 in value, and should be able to present completed Tenders with calculations, for final discussion with the Heads of Departments.

This is a permanent position and a Superannuation Scheme is in operation.

Applicants should write in the first instance for an Application Form which will be treated in strict confidence.

Apply Box No. C13,
Lee & Nightingale,
Liverpool, 2.

ASSISTANT ESTIMATOR/SURVEYOR, with experience in Builders' office, for medium-sized builders on South Coast. Good prospects for advancement. —Apply, giving full details and salary required, Box 6478, "The Builder."

EXPERIENCED ESTIMATOR

required immediately for permanent and progressive position in expanding Building Contractor's office.

Must be fully experienced in pricing all trades for new works of up to £200,000 with a minimum of Supervision. Non-contributory pension and life insurance scheme is in operation. Salary will be in relation to the experience of the successful applicant, but a minimum of £1,000 p.a. is envisaged.

Apply

W. DEAKIN & CO., LTD.,
Guildford Road,
Woking.
Tel: Woking 3743/4/5

ESTIMATOR/SURVEYOR Required by established Building Contractors, S.E. London area. Every consideration given to steady and reliable man; use of car.—State, age, experience and salary required, Box 6469, "The Builder."

SENIOR ESTIMATOR/SURVEYOR Required for medium-sized firm of Building Contractors on South Coast. Experienced in dealing with contracts from enquiry to final account. Good opportunities for right man.—Apply, giving full particulars and salary required, Box 6477, "The Builder."

ESTIMATOR/MANAGER

JOBBING & SMALL WORKS

To control and develop this department of small builders, N. London. Responsible to M.D. Essentials are quick, accurate estimating; experience in similar capacity; ability and desire to progress; cost-consciousness.

Salary £1,000 plus. If you qualify, please write and tell us why.

Box No. 6439 "The Builder."

MANAGERS

EXCELLENT opportunities for young men as ASSISTANTS in Contracts Department of progressive Building and Civil Engineering Contractors in West Surrey. Ability to supervise medium-sized contracts, sound knowledge of surveying essential. Current driving licence; bonus and pension scheme. Apply, giving full particulars of experience, age and salary required.—Box 6262, "The Builder."

Building Overseas

(LONDON BASED)

Substantial national building and civil engineering contractors require a

BUILDING

contract manager

to supervise building work, and the building work in civil engineering contracts, overseas; and to some extent at home also.

He would be responsible to the Manager of the civil engineering department.

He must be prepared to make regular, perhaps monthly, visits overseas for ten days or so; and also to stay overseas for four months at a time, if necessary, at the commencement of new contracts.

The essential qualities sought are a wide technical competence in building; the ability to supervise; energy and good health. Formal qualifications are not considered to be essential, although welcome.

Age 35/50; salary in the range £1,750/2,500 depending on ability; car provided; contributory pension.

Please send full details in strictest confidence to **Box No. 6505 "The Builder".**

J. M. JONES & SONS LTD.

require

SITE MANAGERS

for

Projects of £200,000 upwards. Full control. Capable of top level negotiations in Site Management of Building and Civil Engineering works. Permanent, progressive appointments with Staff Pension and Life Assurance. Apply stating age, details of general and technical education, qualifications, commencing salary required, to the Secretary, **J. M. Jones & Sons Ltd., Highway Works, Maidenhead.**

Applications are invited for the position of:—

CONTRACTS MANAGER

Successful and expanding medium sized London Building Contractors, are seeking a hard working, competent and experienced Contracts Manager, to take control of a section of current work, under the direction of the Contracts Director.

Applicants should have had considerable experience in the industry, with a good sound practical knowledge, and experience in the control of labour and the organization of contract work ranging between £10,000 and £100,000.

The vacancy offers an exceptional opportunity to an ambitious, fit and capable man, who will eventually justify a seat on the Board.

The initial salary will be £1,500 per annum plus car, but a share of the profits will be offered in addition, after a probationary period together with participation in the Company's superannuation.

Apply in confidence to Managing Director,

Box No. 6471, " The Builder."

GENERAL MANAGER

BUILDING DEPARTMENT

Major firm of civil engineering contractors which is extending its operations, invites applications for the position of General Manager, to take charge of its rapidly expanding Building Department.

An aptitude for departmental organisation and administration coupled with the practical appreciation of work in the field is obviously essential.

The successful applicant will be allowed time to become familiar with the Company's procedure and key personnel and thereafter will progressively assume his full executive responsibilities.

This is a challenging opportunity with continuing prospects to a man with a good record of successful previous performance.

The salary is open and the position will command all the usual benefits.

Applications, all of which will be acknowledged and which will be held in the strictest confidence, to :

Box No. 6425, " The Builder."

MANAGER

Scaffolding Contractors require Manager aged 35/45 for their London Office. The Company is well established, and whilst a knowledge of all aspects of scaffolding erection would be a definite advantage, it is considered less important than the ability to become a "business builder". The successful candidate will have responsibility for the whole of the Company's scaffolding activities, and will be expected to consolidate and build on the existing substantial turnover. He must, therefore, have a proven record of administration and negotiating ability, and will have acquired an understanding of the problems of management. There is a contributory pension and widows scheme, and a car will be provided. Remuneration will be in accordance with age and experience. Please write in confidence, and give as much detailed information as possible, including age, salary required, previous experience and salaries earned to

Box No. 6258 "The Builder".

THE LYON GROUP

Require

ASSISTANTS

IN THEIR CONTRACTS DEPARTMENT

Young men in their early twenties with sound basic training in the industry are required to act as Assistants to Contracts Managers. The successful applicants will be required to use their own initiative in a wide variety of tasks and must be capable of being trained into filling managerial positions themselves in the foreseeable future. These positions offer excellent opportunities of advancement with an expanding Group for ambitious and hardworking young men. The Group operates a Non-Contributory Pension and Profit Sharing Scheme. Apply Managing Director.

Ronald Lyon Construction Ltd.,
Auckland House, New Zealand Avenue, Walton-on-Thames, Surrey

CUBITTS

OPPORTUNITIES

EXIST WITH

HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN) LTD.,

for

TRADESMEN

between 21-26 years of age who wish to equip themselves with the basic essentials of contract management.

Vacancies occur in the Main Building Department for

COST SURVEYORS

and these positions could be filled by those who have taken the Ordinary or Higher National Certificates.

A two year term in this capacity will give suitable candidates experience of modern office and site procedure, site measuring and costing, contract cost control, and up to date construction methods and techniques, which form an essential part of training for the first stages of site supervision.

Will interested applicants please reply in writing giving full details to:—

Personnel Manager (M.6839).
1, Queen Anne's Gate,
LONDON, S.W.1.

CONSTRUCTION

A vacancy in a progressive Organisation exists for a young man 19-24 years of age as a

Personal Assistant

to the General Construction Manager

Applicants should have a Technical Training in the Building Industry and ambition to progress with the Organisation.

BUYING

An Assistant Buyer

age 19-24 years

is required to take over a section of the Buying Department and carry on with a minimum of supervision and to advance as ability is proved.

General Manager,
T. & B. (Builders) Limited,
69, Victoria Street,
St. Albans, Herts.

PLUMBING MANAGER

required for London
to take complete charge of
Department under Directors.

Box No. 6504 "The Builder".

OLD-ESTABLISHED FIRM of North London Builders Requires young man to take over position of MANAGER from existing director. Should be able to handle contracts up to £20,000. Percentage of profits and prospect of directorship.—Write, stating full particulars, Box 6432, "The Builder."

ASSISTANT JOINERY WORKS MANAGER Required. Must be a tradesman, with considerable experience in all branches of production in medium-sized Joinery works, and knowledge of modern manufacturing methods; capable of preparing detailed working drawings, without supervision; and used to general administration. Pension scheme applicable. New modern works building and facilities. Excellent prospects for a reliable man with ability and initiative. Apply by letter only, with full details of experience, age, copy references and salary required. —R. FIELDING & SON (BUILDERS), Ltd., Stanhope-road, Blackpool, Lancs.

EXPERIENCED MANAGER

required

for small works and jobbing department by leading Contractors in Berkshire.

Applications invited from men capable of controlling this type of work on their own initiative, including estimating.

Excellent opportunity in an expanding organisation.

Box No. 6450, "The Builder"

LAING

LAING HOUSING COMPANY

offer interesting and progressive careers

in

BUILDING MANAGEMENT

for

ambitious men up to the age of 35 with a trades or similar background, seeking opportunities for development and promotion, and who have the ability to appreciate good craftmanship.

Applicants will be given training facilities where appropriate, those studying for or holding O.N.C., H.N.C. (Building) will be welcome.

Subsistence will be paid where applicable. Excellent pension scheme offered and other progressive benefits. Interviews will be arranged at local centres if necessary, and also in the evenings and at weekends.

Applicants are asked to write giving full details, including when available for interview, to:

Group Personnel Manager (BD.51),
JOHN LAING & SON LTD.,
London, N.W.7

? HAVE YOU STOPPED TO CONSIDER YOUR PROGRESS IN THE FIELD OF BUILDING MANAGEMENT ?

CAN

CUBITTS

ASSIST?

We have vacancies in the London area for one or perhaps two

ASSISTANT CONTRACTS MANAGERS

age 25–40. These appointments would be suitable for those who have obtained a degree in Building or their engineering qualifications and have a real preference for Building.

Reply in confidence to:

The Director, Building Department,
HOLLAND & HANNEN AND CUBITTS (GREAT BRITAIN) LTD.,
1, Queen Anne's Gate, London, S.W.1.

BUILDING MANAGER/ESTIMATOR Required to expand and develop Building Department on his own initiative. Applicants must have held a similar position and consequently be completely conversant with all branches of the industry. Ample scope exists including subsequent Board appointment to anyone capable of installing and organising profitable department.—Apply Box 6511, "The Builder."

CLERKS OF WORKS

KENNETH LINDY & PARTNERS invite applications from CLERKS OF WORKS. City office building. £300,000 contract. 14 months period. Immediate start. Good salary to right man.—Write, or 'phone, 24 St. Mary Axe, E.C.3. AVEnue 6153.

INSPECTOR/CLERK OF WORKS Required by Consulting Engineers for bridge contract in East London. The successful applicant will be required to work under the Resident Engineer and should have had not less than five years' experience of works of Civil Engineering including piling, reinforced concrete and riverside works.—Applications, in the candidate's own handwriting, giving particulars of age, experience and salary required, should be sent to the Consulting Engineers, F. R. BULLEN & PARTNERS, Dacre House, Dean Farrar-street, Westminster, S.W.1.

CLERK OF WORKS Required for 60 weeks, £150,000 Warehouse Contract in Waltham Cross area. Experience in R.C. work an advantage.—Please apply to HALPERN & PARTNERS, Chartered Architects, 58-60 Cannon-street, E.C.4.

ASSISTANT CLERK OF WORKS Required urgently to assist a Senior Clerk of Works on R.C. framed constructional work of some magnitude at the Imperial College of Science and Technology, S. Kensington. Some knowledge of mechanical services an advantage. Anticipated period of appointment at least twelve months, salary £900-£1,000 a year according to age and experience.—Please write, stating age, experience and names of two referees, to NORMAN & DAWBARN, Architects and Consulting Engineers, 7 Portland-place, W.1.

CLERK OF WORKS, preferably in age group 35-45, Required for an approximate period of 2½-3 years, commencing about August 1, 1961, to supervise a large contract covering extensions and extensive alterations to an existing hospital building in Bristol. Considerable experience in contract supervision and organisation on contracts involving structural steelwork and reinforced concrete essential. A sound knowledge of complicated engineering and electrical installations also desirable, and preference will be given to an applicant having practical experience in this field.—Applications, with full details of experience, age and salary required, to W. H. Watkins, GRAY AND PARTNERS, Architects and Surveyors, 8 Colston-avenue, Bristol 1.

EXPERIENCED CLERK OF WORKS Required for supervision of building of department store and multi-storey car park in Sheffield. Salary up to £1,200 per annum, according to experience and ability.—Apply, stating age and experience, in writing, to YORKE, ROSENBERG AND MARDALL, 2, Hyde Park-place, W.2.

CONSTRUCTION CLERK OF WORKS Required (Tec. II War Office grading, under Resident Engineer), with all-round experience for extensive building project consisting of a number of individual buildings, together with necessary external works. The project is of approximately 18 months duration, five miles from Abergavenny in Brecknockshire.—Write, stating experience, age and salary required, to A. M. GEAR & Associates, 12 Manchester-square, London, W.1, quoting Ref. 323/17.

New Laboratories,
Woodstock Agricultural Research Centre,
near Sittingbourne, Kent,
for "Shell" Research Ltd.
Architect: Frederick Gibberd,
8 Percy Street, London, W.1.

CLERK OF WORKS

Applications are invited for the appointment of Clerk of Works during the erection of the above laboratories. Applicants must be qualified and experienced in the supervision of reinforced concrete, structural steel work, and all building and finishing trades to be found in high-quality laboratory work. Write, giving experience and salary required, to:

F. Gibberd, Esq., C.B.E., F.R.I.B.A., M.T.P.I., F.I.L.A.,
8 Percy Street, London, W.1,
not later than mid-day on 7th August, 1961.
Canvassing disqualifies

CLERK OF WORKS

required, Hampstead contract, luxury house in traditional character, approximately £100,000. Top salary to right man.

Write **Box E.4115, c/o Whites, 72/78, Fleet Street, London, E.C.4.**

BUYERS

Progressive Building & Mnftg. Company require experienced

ASSISTANT FOR BUSY BUYING OFFICE

Ultimately to be situated at Epsom. Applicants must have wide knowledge of pre-cast concrete industry and have ability to assist in other responsibilities. Progressive salary & bonus. Apply by letter giving details of previous experience to:

ABCD (Raynes Park) Ltd.
34-35 Alpha Road, Surbiton, Surrey.

CHIEF BUYER

required

by a well established and rapidly expanding Company.

Applicants should possess not less than three years' experience in a senior buying appointment.

This appointment is an important one to both the applicant and the Company.

Apply in writing stating age, experience and qualifications to

Box No. 6512 "The Builder".

A. J. WAIT & CO LIMITED

require

Site Agents

With proven record of ability to control multi-storey, reinforced concrete frames, in the London area. Very attactive area. With proven record of ability to control multi-storey, reinforced concrete frames, in the London area. Very attractive salary, pension and bonus scheme. Car allowance. Write or call—Contract Manager, **Five Star, Kingston Road, New Malden, Surrey.**

PLUMBING, HEATING AND ELECTRICAL

CHIEF BUYER

and

ASSISTANT BUYERS

required urgently for large organisation in London.

Box No. 6503, " The Builder "

FIRST-CLASS AGENT Required for large reinforced concrete superstructure contract in Teddington, Middlesex area. Good salary is offered to the right man who must possess drive, initiative and ambition. Other details such as bonus, etc., can be discussed at interview.—Apply in confidence, stating age, experience and previous employers, to Box 1052, c/o MURRAY & PHELAN, Ltd., Columbia House, Aldwych, W.C.2.

AGENT

Required by a firm of

National Contractors for a Contract of some magnitude

in the Oxford Area.

The job in question is of great prestige value. The position carries high rewards in every respect, and the successful applicant will be responsible to the Directors only.

Only those with all the necessary experience, etc., that qualify them to use the title "Agent" in its fullest sense need apply.

The position can lead to advancement with the Company once the contract has been brought to a satisfactory conclusion. All applications which will be dealt with in the strictest confidence, should be addressed to

The Managing Director,

Marshall Andrew & Co., Ltd.,

St. Andrews House, St. James's Park, S.W.1.

and should give full details of past experience, etc.

BUILDERS' ASSISTANTS

E S & A ROBINSON (HOLDINGS) LIMITED

have a vacancy for a

MATERIALS ASSISTANT

in their Architects' Department

to co-ordinate and advise on the selection of building materials. The department has a very wide range of work on hand and this is a new appointment. Applicants must have relevant experience preferably in building contracting. Salary according to age and experience. Apply with a brief statement of relevant details to:

Staff Manager,

E S & A Robinson (Holdings) Ltd.,

Bristol, 1.

AGENTS

and

GENERAL FOREMEN

required by leading Contractors for Housing and Flat Development in Berkshire and adjoining Counties.

Applications invited from men with first class experience to whom generous salaries would be paid.

Please give full details of previous experience.

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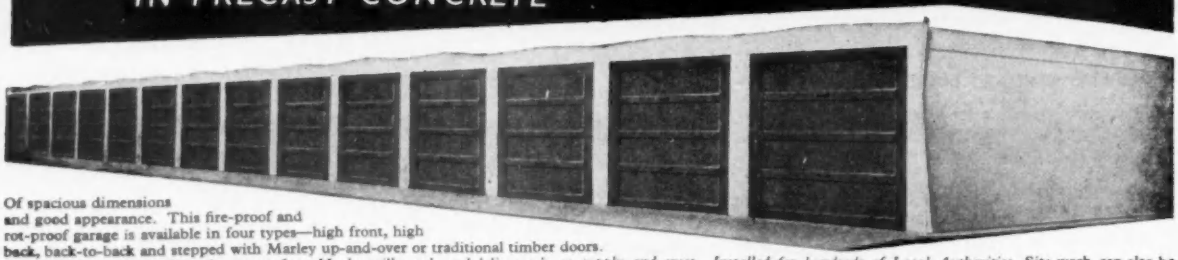

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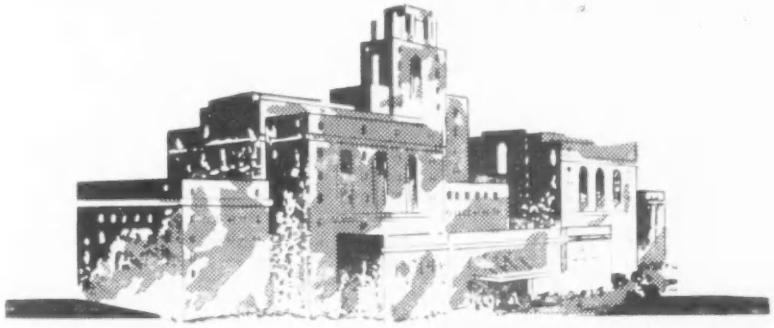

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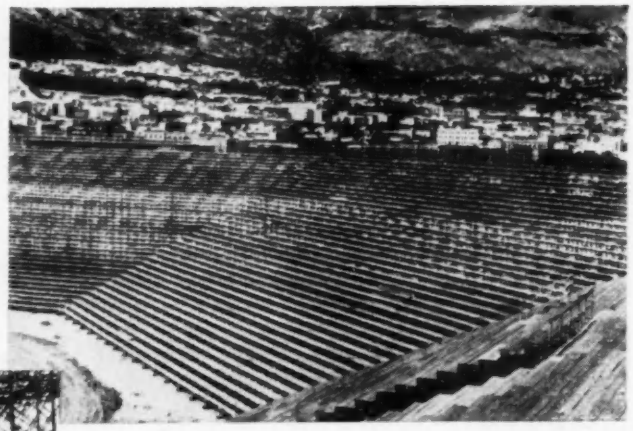

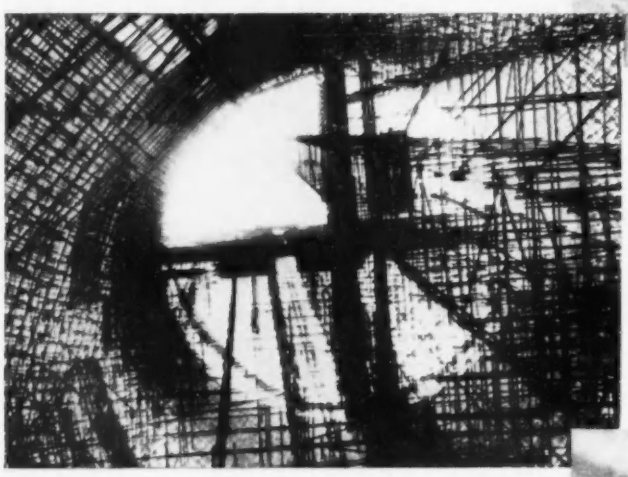

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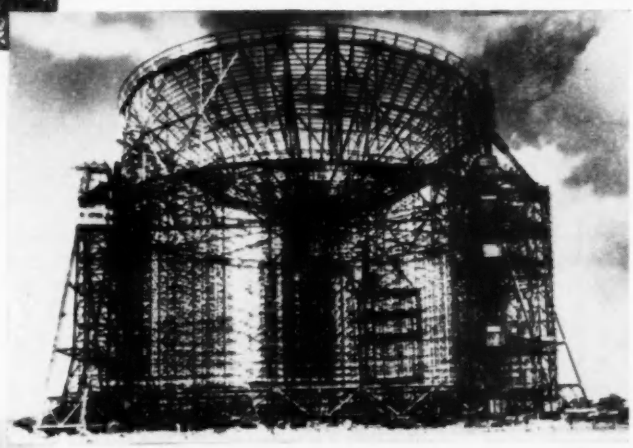

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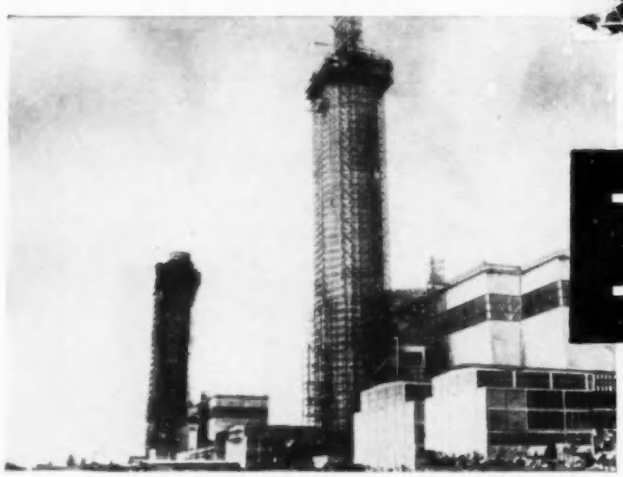

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Published by THE BUILDER LIMITED, at the Builder House, Catherine-st., Aldwych, London, W.C.2, England.
Printed by ST. CLEMENTS PRESS LTD., 112, Queen Victoria-st., E.C.4. July 21, 1961. REGISTERED AT THE GENERAL POST OFFICE AS A NEWSPAPER.